

TEACHERS *of* CHILDREN WHO ARE DEAF

A Report Based on Findings from the Study
*"Qualification and Preparation of
Teachers of Exceptional Children"*

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Qualification and Preparation of Teachers of Exceptional Children

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FOREWORD

THIS PUBLICATION is one of a series reporting on the broad study known as *Qualification and Preparation of Teachers of Exceptional Children*, which for the past 3 years has been a major project of the Office of Education. A main purpose of the whole study has been to learn more about the basic competencies and experience needed by teachers of exceptional children—the deaf, the hard-of-hearing, the blind, the partially seeing, the crippled, the socially or emotionally maladjusted, the mentally retarded, the intellectually gifted, those with special health problems, and those with speech problems.

This project was undertaken largely because of the many requests for an intensive analysis on a nationwide scale of the distinctive aspects of teacher competence for special education. In view of the increasing provisions for the education of exceptional children, the findings herein reported seem particularly timely. A description of the plan of the study may be found in Appendix A.

The opinions present desirable professional standards rather than minimum standards for qualification and professional preparation. It is hoped they will serve to set goals for the future and offer guidelines against which many other ideas and opinions may be helpfully measured. These, however, are not to be thought of as final. From the time the study was undertaken, it was anticipated that further research and discussion would develop from the findings of this project.

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A special vote of thanks goes to the 100 teachers of deaf children who so carefully completed extensive inquiry forms. These inquiry forms provided a major portion of the data upon which this report is based.

The members of the Committee and their chairman, S. Richard Silverman, who prepared a comprehensive statement of the distinctive competencies needed by teachers of deaf boys and girls, deserve special gratitude. They devoted careful study to identifying and describing the knowledges, abilities, and skills essential for such teachers, and to the preparation of their report which makes up a second major portion of this publication.

Gratitude is also due the many educators in the field of the deaf who assisted in the development and pretesting of items contained in the inquiry form: MARGARET BODYCOMB, HAZEL BOTHWELL, MARY A. CARNEY, ANITA CAVANAGH, DANIEL T. CLOUD, MARY C. CONWAY, MRS. CATHARINE FISLER, CATHERINE P. GEARY, MILDRED A. GROHT, JOHN D. HARRINGTON, MRS. SHIRLEY C. HARRIS, LORETTA C. HOGAN, NAOMI HUSTON, ELOISE KENNEDY, MRS. HARRIET L. KERLEY, BERNARD T. LENAHAN, MRS. MARIE T. McNEIL, MRS. CATHERINE L. MADIGAN, MARY C. NEW, MARY NUMBERS, GENEVIEVE S. O'BRIEN, CLARENCE D. O'CONNOR, MRS. HELEN A. PAGE, LIVINGSTON PATTON, MARIE A. RIESE, HUGO SCHUNHOFF, MARGARET MARY WALSH, and OLIVE WHILDIN.

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★ THE DEAF CHILD'S TEACHER: ★

★ INTRODUCTION TO THE ★

★ REPORT ★

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THE EDUCATION of the deaf child is a difficult process, for one of the main avenues of learning—the sense of hearing—is closed to him. The use of language, which the normally hearing child acquires in a casual imitative way, must be *taught* to the deaf child. This is a long process involving systematic instruction, usually extending throughout the child's school life. Educators, as well as other citizens, have long been challenged by this problem, for they recognize that each deaf child who acquires an education not only enriches his own life, but also prepares himself for useful citizenship.

Educational programs for deaf children have been in existence in the United States for almost a century and a half. Through these instructional programs, much has been accomplished which contributes to the lives of those who are deaf. Tribute should be paid both to the teachers who pioneered in the early schools and to those who are serving deaf pupils today.

All the adults who are closely associated with the deaf child play some part in his education. Among these the teacher has a very special role. She must not only help these boys and girls develop and improve communication skills and aid them in overcoming the problems resulting from deafness, but in addition she must aid these children in securing a well-rounded education, including the mastery of tools for learning, such as reading and writing.

During recent years, significant advances have been made in understanding deafness and its treatment—especially in the area of communication. This has bearing on the competencies needed by teachers who are to instruct deaf boys and girls. These advances are already influencing teaching methods, professional standards for teachers, and college and university curricula for the preparation of these instructors. In view of these developments, teachers themselves are often the first to say there is not a close enough relationship between competencies actually needed in the classroom and standards set by State and local agencies and teacher-education institutions.

Who is competent to teach the deaf child? What *are* these special knowledges, abilities, and understandings which make one teacher effective in her work with these children while another falls short of the goal? What experiences in her professional preparation enable her to acquire the coveted competencies that mean so much to both teacher and pupil?

Similar questions were raised concerning competencies needed by teachers in other areas of exceptionality, such as the blind, crippled, or mentally retarded. Through the years, a good many forces have been at work to improve standards for all special education personnel. Public and private agencies have contributed significantly in recent years to the improvement of professional standards. But even so, it has been felt by many leaders that there was need for basic examination of the distinctive knowledges and abilities which are required by special education personnel.

Because of a demand for a more precise understanding of these distinctive qualities, the broad study "Qualification and Preparation of Teachers of Exceptional Children" was undertaken. This project was conducted by the Office of Education in collaboration with leaders in special education throughout the United States. The Office of Education provided a director, who was counseled by two general committees—a National Advisory Committee which assisted in planning the study and in nominating the persons to participate in it, and an Office Policy Committee which aided in the management of the project.¹ See Appendix A for the plan of the study.

What This Publication Contains

The information from the broad study which has bearing on the qualification of teachers of deaf children is reported in this publication. Specifically, it includes findings on: (1) *competencies* needed by teachers of children who are deaf; (2) some opinions on the *proficiency* of some recently prepared teachers of the deaf; (3) *education* and *experiences* for acquiring competence; and (4) a *summary statement including implications* for planning and research.

How Information Was Collected

Two techniques were used to gather information for this report. One was the use of inquiry forms; the other was the work of a committee of experts in the education of the deaf. Through the inquiry forms, facts and opinions were gathered from 100² superior classroom teachers of the deaf, from 60 State and 69 local directors and supervisors of educational programs

¹ The various committee members are listed on pages III and IV.

² For further information about the 100 teachers see Appendix B.



*Courtesy, Detroit Public Schools
Special Education Department*

Helping the Nursery School Child Develop Speech.

for the deaf, and from 57 instructors in colleges and universities preparing teachers in this area.

A large proportion of the information in this bulletin was provided by the 100 classroom teachers of deaf children and youth. The opinions of these special teachers were sought, since they were currently in close daily association with deaf children, and would be in a position to make practical judgments about the competencies and experiences which make teachers

effective. It was recognized that throughout the Nation there would be many more than 100 superior teachers who would be qualified to participate in this project, but it was decided by those planning the study that 100 would be a large enough sample.

The names of classroom teachers were supplied by State Departments of Education on the basis of a sampling procedure developed by the Research and Statistical Standards Branch of the Office of Education.³ Among the factors considered in establishing State quotas were child population and number of pupils enrolled in special education facilities for the deaf in the State. Guidelines to State Departments of Education specify: (1) that teachers be currently employed as classroom teachers and that they be superior in the opinion of their supervisors; (2) that they have specialized preparation for teaching deaf children; and (3) that the selection be made as widely as possible from various types of teaching situations, such as residential and day schools, all age levels of instruction, private and public schools, urban and rural centers. This sampling procedure is identical to that which was used to study other areas throughout the broad project.

In the case of the local and State directors, and college instructors, effort was made to secure the names of *all* those responsible for special education programs. Reported in this publication are the opinions of those with responsibility in the area of the deaf on questions concerning the competence and professional preparation of teachers of the deaf.

The competency committee in the education of the deaf was appointed by the Office of Education upon the recommendation of the National Advisory Committee. Insofar as possible, the 10 members were nominated on the basis of experience in education of the deaf, including classroom teaching, supervision or administration, and teacher education. Effort was made to include persons who would bring representative and varying points of view.

The information collected in all areas of exceptionality was reviewed by the National Committee and by consultants qualified through experience to make suggestions and interpretations. In the fall of 1954, a conference of approximately 80 leaders in the education of exceptional children was called by the Commissioner of Education. This body spent a full week in reviewing data, making suggested interpretations, and drawing implications from the findings.

³ For more detailed information about sampling procedure see Appendix C, page 60.

arranged in rank order² according to the relative importance assigned by the teachers, appear in table 1 on page 7.³ A checking space has been provided in the right-hand column which may be useful to teachers or other special education personnel as a check list.

The opinions of the 100 superior teachers seem to indicate that this list is a valuable one, for they tended to place high importance on a large proportion of the items. To illustrate: from the entire list of 92 items, 28 were rated as "very important" and 53 as "important". It is true that the range of opinion was quite broad on many of these items, but there was not one competence in the entire list that was not given a "very important" rating by at least some of the teachers.

² The rank order is based on the average rating of importance for each item. See Appendix C, page 60, for statistical procedures used.

³ Table 1 also contains some other information concerning self-competence ratings which will be discussed on pages 35-38.



*Courtesy, Lexington School for the
Deaf, New York City*

Young Child Is Learning How To Use a Hearing Aid.

Table 1.—Relative Importance Which 100 Teachers of Deaf Children Placed on a List of Competencies

Rank order of importance ¹	Competencies	Check list ²
<i>Competencies rated "VERY IMPORTANT"—(Items 1–28)</i>		
	The ability—	
1	to teach language development by one or more methods such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, and the Natural Method. (SC, 6.) ³	_____
2*	to teach speech development and voice improvement to deaf pupils by one or more methods, such as the elements, syllables, whole words, kinesthetic, and auditory methods. (SC, 35.) sd. ⁴	_____
3	to recognize the individual differences of each deaf pupil and to make provision for these. (SC, 5.)	_____
4	to help deaf children develop socially acceptable patterns of personal hygiene and behavior. (SC, 2.)	_____
5	to recognize possible causes of social, educational, and emotional maladjustments of deaf children, and to participate in planning courses of action aimed at alleviating these. (SC, 22.) sd.	_____
6	to enunciate clearly and pronounce correctly. (SC, 1.)	_____
7	A knowledge or understanding of the significance of amount of usable hearing. (SC, 3.)	_____
	The ability—	
8	to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities. (SC, 45.) sd.	_____
9	to help parents get information which will assist them in facing the problems arising from having a deaf child in the family. (SC, 27.) sd.	_____
10	to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap. (SC, 29.) sd.	_____
11	to create a wide range of visual experiences to compensate for the deaf child's hearing disability. (SC, 9.)	_____
12	to participate with other members of a professional team in helping parents with problems related to their deaf child's social and emotional problems. (SC, 36.)	_____
13	to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development. (SC, 34.)	_____
14	to counsel deaf children with respect to their social problems. (SC, 38.)	_____
15	to write clearly (cursive and manuscript styles) on charts, paper, and blackboard. (SC, 4.)	_____
16*	to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil. (SC, 25.)	_____

See footnotes at end of table.

Table 1.—Continued

Rank order of impor- tance ¹	Competencies	Check list ²
<i>Competencies rated "VERY IMPORTANT"—(Items 1–28)—Con.</i>		
	The ability—	
17	to participate with other members of a professional team in helping parents with problems related to their deaf child's limitations and potentialities. (SC, 18.)	
18	A knowledge or understanding of materials useful in teaching lipreading to the deaf. (SC, 20.)	
	The ability—	
19	to provide deaf pupils with opportunities in the curriculum for experiences in health education. (SC, 43.)	
20*	to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons. (SC, 32.)	
21	A knowledge or understanding of the possible effect of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development. (SC, 8.)	
	The ability—	
22	to help deaf children use visual clues in analyzing a situation and in communicating with others. (SC, 31.)	
23	to participate with other members of a professional team in helping parents with problems related to their deaf child's school placement. (SC, 44.)	
24	to organize and develop a curriculum around socially useful and meaningful central themes or units of experience. (SC, 39.)	
25	to participate with other members of a professional team in helping parents with problems related to their deaf child's occupational placement. (SC, 67.) ad.	
26	to counsel deaf children with respect to their educational problems. (SC, 17.)	
27	to teach auditory training by one or more methods, such as Goldstein's Acoustic Technique, and the Whitehurst Method. (SC, 55.) ad.	
28	A knowledge or understanding of the significance of age at onset of deafness. (SC, 7.)	
<i>Competencies rated "IMPORTANT"—(Items 29–31)</i>		
	The ability—	
29	to provide deaf pupils with opportunities in the curriculum for experiences in physical education. (SC, 63.) ad.	
30	to counsel deaf children with respect to their vocational problems and life goals. (SC, 57.) ad.	
31	to draw educational interpretations from case records and histories. (SC, 11.)	
32*	to draw educational interpretations from audiograms. (SC, 50.)	

See footnotes at end of table.

Table 1.—Continued

Rank order of impor- tance ¹	Competencies	Check list ²
<i>Competencies rated "IMPORTANT"—(Items 29-81)—Continued</i>		
	The ability—	
33	to teach speechreading (lipreading) by one or more methods, such as Nitchie, Jena, Kinzie, Newer, and Müller-Walle. (SC, 28.)	_____
34	to develop and make use of individual educational records of deaf children. (SC, 14.)	_____
35	to interpret educational programs for, and the problems and abilities of, the deaf to the general public. (SC, 13.)	_____
	A knowledge or understanding of—	
36	reference materials and professional literature on the education and psychology of the deaf. (SC, 23.)	_____
	The ability—	
37	to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities. (SC, 42.)	_____
38*	to operate amplifiers and other audio aids. (SC, 40.)	_____
39*	to draw educational interpretations from psychological reports. (SC, 47.)	_____
	A knowledge or understanding of—	
40	the general meaning of the diagnosis and the prognosis for each individual deaf pupil in your class. (SC, 52.)	_____
41	sources of procurement of special educational materials and equipment for deaf children. (SC, 37)	_____
42	the anatomy and physiology of the speech mechanisms. (SC, 33.)	_____
	The ability—	
43	to operate filmstrip and motion picture projectors and other visual aids. (SC, 49.)	_____
44	to interpret educational programs for, and the problems and abilities of the deaf to teachers of normally hearing children. (SC, 12.)	_____
	A knowledge or understanding of—	
45	methods and techniques of teaching the normal child. (SC, 48.)	_____
46	the purposes, services, and locations of national organizations concerned with the education or general welfare of the deaf, such as the International Council for Exceptional Children, the Alexander Graham Bell Association for the Deaf, and the Convention of American Instructors of the Deaf. (SC, 15.)	_____
	The ability—	
47	to provide deaf pupils with opportunities in the curriculum for experiences in domestic arts. (SC, 88.)	_____
48	to organize and carry out field trips. (SC, 10.)	_____
49	to work effectively with PTA, alumni groups, and other organizations associated with the school. (SC, 24.)	_____

See footnotes at end of table.

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Table 1.—Continued

Rank order of importance ¹	Competencies	Check list ²
<i>Competencies rated "IMPORTANT"—(Items 29-81)—Continued</i>		
	The ability—	
50	to provide deaf pupils with opportunities in the curriculum for experiences in industrial arts. (SC, 91.) sd.	
51	to draw educational interpretations from reports of social workers. (SC, 26.) sd.	
52	to provide deaf pupils with opportunities in the curriculum for experiences in dramatic arts. (SC, 54.)	
53	A knowledge or understanding of the anatomy and physiology of hearing mechanisms. (SC, 19.) sd.	
	The ability—	
54	to interpret educational programs for, and the problems and abilities of, the deaf to normally hearing children. (SC, 21.)	
55*	to draw educational interpretations from otological and other medical reports. (SC, 61.)	
56*	A knowledge or understanding of the locations of services offered deaf children and their parents by non-school organizations, such as clinics, health department, and vocational rehabilitation agencies. (SC, 53.)	
57	The ability to interpret educational programs for, and the problems and abilities of, the deaf to non-professional school workers, such as bus attendants and school custodians. (SC, 16.) sd.	
58	A knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed child. (SC, 71.)	
59	The ability to provide deaf pupils with opportunities in the curriculum for experiences in arts and crafts. (SC, 80.) sd.	
60	A knowledge or understanding of the findings of research studies which have bearing on the education, psychology, and social status of the deaf. (SC, 60.)	
	The ability—	
61	to provide deaf pupils with opportunities in the curriculum for experiences in fine arts. (SC, 83.) sd.	
62	to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss. (SC, 66.)	
63	to administer to deaf children individual diagnostic tests of reading and arithmetic disability. (SC, 56.)	
64	to provide deaf pupils with opportunities in the curriculum for experiences in music. (SC, 74.) sd.	
65	to take responsibility for, or to assist with, one or more of such activities as the Boy and Girl Scouts and photographic clubs. (SC, 62.)	
66	A knowledge or understanding of— the causes of the various types of hearing disability. (SC, 46.) sd.	

See footnotes at end of table.

Table 1.—Continued

<i>Rank order of impor- tance¹</i>	<i>Competencies</i>	<i>Check list²</i>
<i>Competencies rated "IMPORTANT"—(Items 29-81)—Continued</i>		
	A knowledge or understanding of—	
67	the educational provisions for deaf children under existing Federal, State, and local laws and regulations. (SC, 59.)	
68	methods and techniques of teaching the mentally retarded child. (SC, 70.)	
69	methods of hearing testing and the various instruments used for this purpose. (SC, 64.)	
70	methods and techniques of teaching the gifted child. (SC, 69.)	
	The ability—	
71	to give "first-aid" to hearing aids. (SC, 77.)	
72	to plan and carry out an assembly program. (SC, 41.) ad.	
73	A knowledge or understanding of the history of education of the deaf (SC, 30) ad.	
74	The ability to contribute to community leadership in establishing an educational program for deaf children. (SC, 72.)	
75	A knowledge or understanding of factors involved in fitting hearing aids. (SC, 81.)	
	The ability—	
	to administer to deaf children—	
76	standardized group achievement tests. (SC, 51.) ad.	
77	individual performance tests of mental ability. (SC, 82.)	
78	pure-tone audiometric tests. (SC, 58.) ad.	
79*	to teach a multi-grade class of deaf children. (SC, 65.) ad.	
	A knowledge or understanding of—	
80*	recent developments in theories and controversies on diagnosis and treatment of different conditions resulting in deafness. (SC, 75.)	
81*	general plan of medical treatment of the different types of hearing disabilities. (SC, 79.)	
<i>Items rated "LESS IMPORTANT"—(Items 82-91)</i>		
	The ability—	
82	to administer to deaf children group non-language tests of mental ability. (SC, 76.)	
83*	to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children. (SC, 73.)	
84*	to play a piano and to develop and direct a rhythm band. (SC, 78.)	
	A knowledge or understanding of—	
85	methods and techniques of teaching the athetoid child. (SC, 89.) ad.	
86	the basic theory of electronics as applied to amplifiers and hearing aids. (SC, 85.)	

See footnotes at end of table.

Table 1.—Continued

Rank Order of Importance ¹	Competencies	Check list ²
<i>Items rated "LESS IMPORTANT"—(Items 82-91)—Continued</i>		
87	The ability to read lips. (SC, 68.) ad.	→
88	The ability to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, etc.) (SC, 86.)	—
89	A knowledge or understanding of methods of teaching blind children. (SC, 92.)	—
90	The ability— to use the visual speech techniques developed by the Bell Telephone Laboratories. (SC, 90.)	—
91*	to use the "manual" alphabet in teaching. (SC, 84.) ad.	—
<i>Items rated "NOT IMPORTANT"—(Item 92)</i>		
92*	The ability to use "sign" language in teaching. (SC, 87.) ad.	—

¹ Teachers rated the items as "very important," "important," "less important," "not important." The rank order of importance is based on the average of these ratings. See Appendix C, page 60, for statistical procedures used.

² Space at the right-hand side of the page has been provided so that the reader may use the list of competencies for various purposes of his own. For example, teachers may wish to compare their own efficiency with the ratings of importance placed on the competencies by the 100 teachers. Directors and supervisors in State and local departments of education and college instructors will undoubtedly find uses as they work with teachers and students.

³ When the inquiry form was sent to teachers they were requested not only to rate the 92 items as to importance but also to indicate their proficiency in these various competencies. These ratings were converted into averages and arranged in rank order of proficiency. The letters SC (self-competence) together with the rank order numbers are given at the end of each item. Discussion of the self-appraisal of the 100 teachers will be found on pages 35-38.

⁴ ad denotes significant difference. For all items marked "ad," analysis showed a statistically significant difference between the average rating of importance and the average rating of proficiency. See Appendix C, page 63, for statistical procedures employed to determine significant difference. A discussion of these differences may be found on page 35.

⁵ Starred (*) items indicate competencies which showed a statistically significant difference between the average rating of importance given by the 60 day school teachers and the average rating of importance given by the 60 residential school teachers. See Appendix C, page 63, for statistical procedures employed to determine significant difference between the average ratings of the two groups. A discussion of these differences may be found on page 17.

DISCUSSION OF TEACHERS' EVALUATIONS

The list of knowledges and abilities centers around several main functions. These are: development of communication in deaf pupils; curriculum planning and methods of teaching; understanding the deaf pupil; interpersonal relationships; cooperation with individuals and organizations, and the use of tests and records. The abilities and knowledges which the teachers of the deaf rated as of highest importance are effectiveness in *developing and improving a means of communication, understanding the deaf child and the problems arising from deafness, and curriculum planning, and methods of teaching the deaf*. In contrast—among the competencies which the teachers rated as of lesser importance were the abilities to *serve deaf pupils with multiple handicaps* and to *administer various kinds of tests*.

Some of the competencies in the list are abilities *to do*; others are knowledges, as reference to table 1 will show. Actually, the proportion of ability items to knowledge items in the entire list is approximately 3 to 1. Teachers, however, tended to rate as "very important" in an even higher ratio those competencies which were expressed in terms of ability to do something rather than in the more strict terms of knowledge.

It was thought that teachers who received their specialized preparation prior to January 1, 1946, might evaluate the relative importance of the competencies differently from those who had received their specialized preparation since this date. It was found, however, that the evaluations of the importance of the list of knowledges and abilities made by the two groups showed no significant differences.⁴

Communication and Technical Knowledge

Since the deviation of the deaf child is an auditory one, a large number of competencies in this list deal primarily with the technical factors of communication. Teachers tended to rate these as "very important." The top two in the entire list, for example, are specifically concerned with developing a means of communication. They are: the ability to teach language development [1]⁵ and speech development [2] by one or more methods. Farther down the list, but still rated as "very important," is the ability to show deaf children how to use visual clues in analyzing a situation and in communicating with others [22] as well as the ability to teach auditory training [27].

Teachers emphasized, also, as "very important" two technical knowledges which have direct educational implications for teaching language and speech development. They are: an understanding of the significance

⁴ See Appendix C for statistical procedures.

⁵ In each case the number in brackets refers to the rank order of importance of the item in table 1.

of the amount of usable hearing [7] and the significance of age at onset of deafness [28]. In contrast, they place much less emphasis on technical knowledges having to do with the physics of sound or the physical aspects of deafness, such as an understanding of electronics as applied to hearing aids [86], factors in fitting hearing aids [75], recent theories in diagnosing and treating conditions resulting from deafness [80], and the anatomy and physiology of the speech mechanism and the hearing mechanism [42 and 53].

Understanding The Deaf Pupil

Although the list of competencies in the inquiry form presented to the 100 teachers contained only a few items specifically concerned with understanding the deaf child, such competence is implied in many of the others. Teachers rated most of these high on the list as evidenced by the rank order in table 1. Two for example are rated among the top five. Approximately 90 percent of the teachers evaluated as "very important" the ability to recognize individual differences in each deaf pupil and to make provision for them [3], and to recognize possible causes of social, educational, and emotional maladjustment, and to participate in planning courses of action aimed at alleviating them [5]. No teacher regarded either of them as "not important" and not more than two teachers considered these abilities to be "less important." Also included among the "very important" competencies was a knowledge or understanding of the possible effect of the socioeconomic conditions and emotional climate of the home on the deaf child's social, emotional, and intellectual development [21]. However, the two items rated higher included not only *understanding* but also the teacher's ability to *do* something about the problems.

Interpersonal Relationships and Cooperation with Organizations

An increasingly high premium is being placed on the teacher who has the ability to develop and maintain good relationships with children, parents, and co-workers. The teachers participating in this study seem to place more value on those competencies requiring close personal relationships with parents, teachers, and children than on those involving a knowledge of agencies or organizations, or participation in groups. Clear-cut evidence on this generalization is not available, on the basis of opinions given by the 100 teachers; the matter could well be studied further.

The 100 teachers consistently rated items related to helping parents [9, 12, 17, 23, 25] as "very important." True, all but one of these also implied ability to work as a team, but the focus in these items is on parent-teacher relationships. Teachers further evaluated as "very important" most of the

counseling items, which again implied the need for a good individual relationship between the child and the teacher [10, 14, 26]. While they valued highly this ability to help parents and children with their problems, they rated much farther down the list the importance of knowing about the services of agencies and organizations concerned with these problems of deafness [46, 56].



Courtesy, Dearborn, Mich., Public Schools

Deaf Children Being Taught To Use Their Residual Hearing.

Curriculum Planning and Methods of Teaching

One of the major teaching responsibilities is the building of a good school curriculum. As might have been anticipated, many of the highly valued competencies in the list center around ability to plan a curriculum and a knowledge of methods used in teaching the deaf. Some of these specifically describe competence in the curriculum field; in others such competence is implied. Examples can be found within the top 11 items in table 1. Specifically described as a curriculum function is the ability to organize and develop a program for deaf children on the basis of their individual needs and potentialities [8]. Similarly, the same emphasis is found, but by implication, in the ability to create a wide range of visual experiences to compensate for the deaf child's hearing disability [11].

Teaching methods unique to the field of the deaf, some of which have already been mentioned under the topic "Communication and Technical Knowledge" rated very high in the list. Teachers recognized also the high value of the ability to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development [13] and to develop a curriculum around socially useful and meaningful experiences [24] by placing these among the "very important" competencies. They, however, rated competency in such extracurricular activities as Boy Scouts, Girl Scouts, and hobby clubs as 65th in the list. This latter rating might well be further explored.

A knowledge of teaching methods used in the instruction of deaf children with additional handicaps such as mental retardation [68], athetosis (cerebral palsy) [85], or blindness [89], was rated more than two-thirds of the way down the list. This rather low emphasis on ability to deal with children who have multiple handicaps tends to be typical of teachers of the various types of exceptional children participating in the broad study *Qualification and Preparation of Teachers of Exceptional Children*. Do special teachers believe that their responsibility should be limited to children with a single handicap? If so, this is an area for further study, since many handicapped children tend to have more than one deviation.

As indicated by their evaluations, teachers seem to be more concerned with understanding the use of specialized materials than in knowing how to procure them. Rating as high as 18th in the list was the knowledge of materials used in teaching lipreading, while knowing the source of procurement of special education materials was rated 41st.

Ability To Use Tests and Records

The ability to make educational interpretations of reports of various specialists was also rated low in contrast with this high rating of the ability to understand the child and to help parents and children with their problems. Not one of these items concerning competence in the use of tests and records was rated as "very important" by these teachers. Among those which were ranked highest were: the ability to draw educational interpretations from case records and histories [31], from audiograms [32], and competence in developing individual educational records of deaf children [34]. Ranked lower but still important was the knowledge of methods of hearing testing and the various instruments used for this purpose [69], and the ability to administer standardized achievement tests [76]. Skill in administering "nonlanguage" tests of mental ability [82] was thought to be "less important" by teachers of the deaf.

DIFFERENCES IN EVALUATION OF COMPETENCIES BY DAY AND RESIDENTIAL SCHOOL TEACHERS

It is often said that the goals in the education of the deaf child are the same wherever the child may be, either in a day or a residential school. Some people believe that the necessary teaching competencies are identical; others believe that there are some differences. In the study, a statistical comparison was made of the importance of the competencies, as evaluated by the 60 residential school teachers, and the 40 day school teachers.⁶ In general, there was little difference in the values placed on the competencies by the two groups of teachers. Through examination of the data it was found, however, that the ratings on 15 competencies did show statistically significant differences. These are starred in table 1. In all but two cases, the day school teachers valued the item more highly than did the residential school teachers. Items 91 and 92 were the exceptions.

The competencies on which the differences appear are related to the use of tests and records, technical teaching aids such as amplifiers and other auditory teaching aids, and ability to work with architects or school administrators in planning school buildings. The difference in ratings was enough to have affected the rank order of the entire list. For example, if day school teachers' opinions had been used alone, the ability to interpret audiograms would have been among the top 22 competencies. It now appears as item number 32.

PERSONAL CHARACTERISTICS OF THE TEACHER

This discussion of the 100 teachers' rating of competencies could not well be closed without reference to the personality of the teacher. When this broad project was undertaken, it was decided not to try to include in the check list items of competence concerned with personal traits, mainly because research on the characteristics of successful teachers is already available, and because an analysis of personality factors would have been a study in itself.

The 100 teachers, however, were very sensitive to the importance of the teacher's personality. This is shown by the large number of teachers who replied to the following free response question: "Are there personal characteristics needed by a teacher of the deaf that are different in degree or kind from those needed by a teacher of normally hearing children?" Ninety-

⁶ See Appendix C, page 62, for statistical procedures used.
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five of the 100 teachers replied to this question; 79 in the affirmative, and 16 in the negative. Of the 79 teachers who gave affirmative replies, 72 took time to comment extensively in an effort to identify the personal traits which they believed a teacher of deaf children and youth should have.

Their comments run the gamut of personality traits and characteristics, from patience, understanding, sympathy, the missionary attitude, love of pupils, to ability in dramatizing many different situations, the possession of a creative imagination, an overabundance of physical stamina, the ability to speak clearly, and good facial control and expression.

The trait most often mentioned was "patience." Forty-seven of the 72 teachers who commented (59 percent) used this word, and many others implied the necessity for this quality. The need for a greater degree of understanding for the pupil who is deaf than for the "normal" student was expressed by 32 percent of these teachers. Some other characteristics emphasized in many of the comments were the need for the teacher to be resourceful and inventive.

The teachers also identified through their use of descriptive terms some characteristics which seem to have rather specific implications. Many of them indicated that the teacher of the deaf must have a healthy personality and attitude. She must be willing to devote time to her school program and have a deep understanding of pupils and their individual and collective problems. They express these characteristics in such specific comments as "Deaf children tend to imitate their teachers more than hearing children, for they have less outside contact with the hearing world." "The teacher needs to draw out the timid, put a brake on the 'bumptious,' push the laggard, and inspire all to work hard, pleasantly." Another commented that she must be able to maintain an environment of cheerfulness and relaxation both with children and with their parents, and must be able to gain their confidence and wholehearted cooperation in difficult situations.

COMPETENCIES IDENTIFIED AND DESCRIBED BY A COMMITTEE

The 10 members of the competency committee assumed the responsibility of writing a statement concerning the knowledges and abilities which they regarded as essential for teachers of deaf children. It was the function of this committee to define the competencies which were different from, or in addition to, those required by a regular classroom teacher. The committee members were widely scattered throughout the United States, and with the exception of two meetings, did all of their work through correspondence. The complete committee report prefaced by the names of the members is presented in the following pages.

S. RICHARD SILVERMAN, *Chairman*

RICHARD S. BRILL,
Superintendent, California
School for the Deaf
Riverside, Calif.

MRS. RACHEL DAVIES,
Kent State University
Kent, Ohio

MRS. SERENA DAVIS,
Principal, Willis & Elizabeth
Martin Public School
Philadelphia, Pa.

HARRIET F. McLAUGHLIN,
Principal, Junior High School #47
New York City

CLARENCE D. O'CONNOR,
Superintendent, Lexington School
for the Deaf
New York City

THOMAS H. POULOS,
Principal, Michigan School
for the Deaf
Flint, Mich.

HUGO SCHUNHOFF,
Superintendent, West Virginia
School for the Deaf
Romney, W. Va.

MARGUERITE STONER,
John Tracy Clinic
Los Angeles, Calif.

ALICE STRENG,
Director, Division of Exceptional
Education
Wisconsin State College
Milwaukee, Wis.

THE REPORT

Our report deals with the specific competencies required by teachers of deaf children. We declare at the outset that we are not concerned with the ease and completeness with which our recommendations can be universally implemented. Rather, we trust that the information contained in this report can serve as a useful *guide* for those who wish to initiate *optimal* programs for teacher training and teacher evaluation or for those who wish to modify existing ones, regardless of the organizational context in which the program is carried on.

Before we describe the organizing principle of our report, it is essential that we attempt to define meaningfully the kind of child at whom the recommended competencies are directed. We are aware that a great deal of unnecessary confusion, not only among the laity but among well-intentioned professional workers as well, has surrounded the precise classification of hard-of-hearing and deaf children, and has in turn befogged many discussions of their problems. The confusion seems to stem from the differences in the frameworks of reference to which classification and nomenclature are related. For example, some workers classify the child who develops speech and language prior to onset of deafness as "hard-of-hearing," even though he may not be able to hear speech at any intensity. This child, it is argued, unlike the congenitally profoundly deaf child who has not acquired speech naturally, behaves as a hard-of-hearing child in that his speech is quite natural, and, therefore, he should be classified as "hard-of-hearing." It is obvious in this case that some hazy

educational standard has been the basis of classification. If, however, we consider the same child from a purely physiological standpoint, it is grossly misleading to term him "hard-of-hearing" when for all practical purposes he hears nothing at all.

The situation is complicated further by the use of terms which suggest not only physiological and educational factors but also gradations of hearing loss and even the time of onset. To this category belong such terms as "deaf and dumb," "mute," "semi-deaf," "semi-mute," "deafened," "partially deaf," and others. These terms are of relatively little value from either the physiological or educational points of view and it would be well to eliminate them from general usage.

For purposes of our discussion we need to define the deaf child in terms of the extent to which his impaired ability to communicate by speech and hearing affects his psychological and educational potential. The child with whom our recommended competencies are concerned is the child who has not developed the expressive and receptive skills of communication prior to the onset of deafness. He cannot initiate language through speech nor can he understand the speech of others as is normally done by a hearing child at an equivalent level of maturation. In



*Courtesy, Detroit Public Schools,
Special Education Dept.*

**A Teacher Uses Her Ability To Measure Hearing Loss
With the Aid of an Audiometer.**

addition, we may be concerned with the child who has acquired some skills of communication (as described above) prior to the onset of deafness but who is at a level of competence in language that requires special technique to develop it.

Obviously, from the physiological standpoint, a child is deaf when his hearing is so impaired that he cannot understand connected speech through the ear even with amplification. We are aware that delimiting definitions are hazardous, and we recognize that in the long run *each child's potential must be assessed individually* so that we avoid being restricted by the tyranny of classification. Nevertheless, we believe that the orientation that we have suggested is necessary for the purpose of this report.

Our analysis of competencies needed by teachers of deaf children suggested that we organize our recommendations around *six areas* of knowledge to which certain abilities of the teacher are related. These areas are: communication; curricular adaptations; psychological tests and measurements; social adjustments; home-school relations; and the philosophy of the education of the deaf. Within each one of these areas we shall delineate certain fundamental knowledge which leads to additional specific knowledge relevant to assessment and instruction of the child. All of this knowledge is then related to specific abilities required by the teacher. Our scheme of delineating areas of knowledge and abilities should not suggest that we fail to recognize the inter-relationship of various areas. *Actually, the ability of the teacher to unify and integrate all the areas in her approach to the children is the "sine qua non" of all the competencies.* We labor under no illusion that possession of knowledge about an area insures ability to translate that knowledge into practice. All we can do is state the required knowledge and abilities. Furthermore, how one acquires them is beyond the scope of this report.

Because it would involve needless repetition, we shall not mention under each major area, except where special emphasis is needed, the requirements that the teacher be an intelligent consumer of technical literature, and that she be familiar with the literature peripheral to her field. Here and there we shall use the names of persons related to specific principles or techniques. Our guide shall be the extent to which the common usage of these names conveys information among workers in the profession. Of course, the amount of space allotted to a given topic is in no way proportional to its significance, since the nature of certain areas determines the quantity of material that can be used about them in a report of this type.

COMMUNICATION

It is obvious that the teacher must be well grounded in knowledge of the process of communication as it relates to deaf children, which involves hearing, speech, language, lipreading, and vision.

HEARING

We can delineate best the required knowledge about hearing by considering it from the point of view of (1) the stimulus, (2) the organism, (3) the response of the organism to the stimulus, and (4) auditory training.

The stimulus.—We expect the teacher of the deaf to know about the nature of sound, its measurement and its transduction by electro-acoustic devices. Basically, from the acoustic standpoint, this would involve simple harmonic motion and pure tones and complex sounds from which would be developed concepts of intensity, frequency, phase, resonance, and harmonic analysis. Included would be the principles of sound reflection, absorption, and reverberation. It is not necessary for the teacher to understand the elegant mathematical treatment of these subjects beyond simple algebraic expressions where the latter are applicable. In the area of electricity we include the concept of electrons, neutrons, and protons leading to an understanding of the dimensions of electricity—current, voltage, and resistance, and finally energy. An understanding of the principles of impedance is desirable.

The measurement of the original or transduced stimulus requires knowledge about the decibel (logarithmic scales) and its derivation. The principles of operation of circuit components, such as batteries, generators, microphones, earphones, loudspeakers, resistors, condensers, coils, transformers, attenuators, vacuum tubes, and transistors need to be known, including measuring devices, such as voltmeters and ammeters and their application to sound level meters and audiometers.

The preceding knowledge should lead the teacher to an understanding of the principles of electrical amplification of sound which underlie the design and construction of individual and group hearing aids and the factors which influence the performance of hearing aids, such as gain, frequency response, distortion, and maximum acoustic output (including the notion of compression amplification). It is important to have knowledge about "first aid" for hearing aids.

Modern methods of displaying sound, such as the Visible Speech apparatus, frequency and intensity indicators, oscilloscopes and

their possible application to teaching the deaf, have significance for the teacher.

The organism.—The teacher should understand the anatomy, physiology and pathology (including aberrations of structure and function) of the auditory system, and relatively simple interpretations of commonly advanced theories of hearing. This information should be basic to knowledge about the etiology of deafness and the characteristics of the clinical groupings—conductive, perceptive, mixed, central, and psychogenic deafness. Familiarity with preventive principles (hearing conservation programs) and medical (anti-biotics, chemotherapy) and surgical procedures (fenestration, mastoid, tonsils, and adenoids) related to deafness is important.

The response of the organism to the stimulus.—We recommend that the teacher be familiar with the basic psycho-physical methods as they relate to the measurement of such aspects of hearing as loudness, pitch, differential sensitivity, masking, fatigue, and tolerance involving relevant stimuli, such as noise, pure tones, and speech. These concepts should undergird an understanding of the clinical techniques of assessing hearing and the classical interpretations of results—tuning forks, audiometry by pure tones, and speech and electro-encephalography, including the approach through conditioning, such as psychogalvanic skin resistance and peg boards. Not to be overlooked are the insights required for judgments by the tester of startle responses and the relation between voice quality and hearing.

Auditory training.—Of great significance is knowledge of techniques of giving the child meaningful differential auditory experiences involving environmental sounds and interpretation of speech using many forms of amplified sound, such as the "live" voice and recorded material.

Out of the knowledge recommended for hearing should grow the abilities: to consult constructively as consumers with architects and/or acoustic experts concerning sound treatment requirements for rooms in which deaf children are taught; to evaluate for educational purposes various instruments which display sound; to advise concerning the purchase of individual and group hearing aids; to use and manipulate intelligently hearing aids, recording devices, and other electro-acoustic equipment used for teaching; to detect improper or inadequate performance of equipment and to make minor repairs; to administer individual and group audiometric (speech or pure tone) tests; to assess a child's



Courtesy, John Tracy Clinic, Los Angeles

A Deaf Child Makes Full Use of Amplifying Equipment.

educational potential through hearing by evaluating formal hearing tests and subjective impressions; and to develop optimum use of residual hearing in all phases of the instructional process.

SPEECH

We shall consider the required knowledge about speech under the following headings: (1) the nature and production of speech, (2) the assessment of speech, and (3) instruction in speech.

The nature of speech.—The teacher should be familiar with the development and production of "normal" speech in normal hearers and should be introduced to the contributions to our

understanding of the speech process from the fields of linguistics, acoustics, psychology, and physiology.

Specifically, the teacher should know the anatomy and physiology of the mechanisms related to the production of speech. She should relate this to information about the factors in speech which contribute to intelligibility, such as articulation (of the phonemes and combinations thereof), voice quality, temporal patterns involving rate, pitch changes, stresses, and accents. Knowledge about how the speech of the deaf deviates with respect to these factors is essential.

Assessment of speech.—The teacher should be familiar with tools and techniques for assessing and diagnosing difficulties of speech of deaf children. These include rating scales, articulation check lists, formal tests of intelligibility, interviews, group auditing, including indirect methods, such as kymographs and audio-spectrometers.

Instruction in speech.—It is imperative that the teacher know some of the major systems of orthography, particularly those frequently used in teaching speech to children who are deaf. Among the prominent systems are the International Phonetic Alphabet, the Northampton Charts, diacritical marks, Alcorn symbols, and various color codes intended to differentiate the production of the elements of speech. Among the classical approaches to developing and improving the speech of deaf children she should know the continuum from the so-called analytical or elemental to the synthetic and "natural" techniques, including fixed methods such as "babbling," and those methods which stress more or less touch (vibration), vision, hearing, and kinesthesia.

The teacher should then be able to detect, assess, analyze, and frequently to imitate the abnormalities of speech at all levels of the deaf child's development, to plan a program of speech development, to implement eclectically and rationally approaches and systems of teaching speech to the deaf, to use critically various mechanical aids (hearing aids, models, "translators"), and, finally but significantly, to motivate speech in deaf children.

LANGUAGE

The knowledges recommended in the area of language, *the basic "stuff" of communication*, lend themselves to organization around (1) the developmental psychology of language in hearing children, (2) assessment and understanding of language problems for the deaf, and (3) instruction in language.

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Developmental psychology.—The teacher must know the patterns of language development in normal children, particularly those which relate to concept formation and the verbalization of experience, associated with growth in vocabulary and structured language. An understanding of the configurational properties of language is essential, including (a) the syntactical patterns associated with parts of speech, classes of words, word order, grammatical principles of modification; and (b) the semantic rules that relate words or sentences to things and events.



Courtesy, Univ. of Illinois, Springfield,
Division of Services for Crippled Children

Deaf Child Learns Names of Objects.

Assessment and understanding of particular language problems of the deaf.—Familiarity with the characteristic language difficulties at all levels of the verbal development of the deaf child is of prime significance. These include such frequently occurring problems as use of articles, word order and tense, verbalization of abstractions, multiple meanings of words and colloquial and idiomatic expressions. The teacher must be aware of the limitations of "language tests" (aptitude, diagnostic, and achievement) for the hearing in assessing the language of the deaf child, and yet she needs to know how to determine the child's level of expressive and receptive development as it relates to the ideal of "normal" language usage of hearing children.

Instruction in language.—As a guide in planning the steps necessary to insure the development of functional use of language by

deaf children, it is important for the teacher to know about traditional and evolving approaches to teaching language known as "natural," Five Slate, Vinson, Fitzgerald, Wing, and other "systems." At all times she must be sensitive to certain critical relations, particularly the child's ability to verbalize and to conceptualize, and his development in language and speech.

LIPREADING

The required information about lipreading involves (1) the lipreading process, and (2) assessment and instruction in lipreading.

The lipreading process.—The teacher must understand the lipreading process as it relates to certain physical factors, such as lighting, visibility of movement of talker's lips and face, vision, and other factors such as degree and kind of hearing loss, language development, age of onset of deafness, intelligence, and educational achievement.

Assessment and instruction in lipreading.—Familiarity with the possibilities and limitations of formal testing materials (Utley and Heider tests) and ways of assessing informally ability in lipreading is essential. The teacher should know the traditional and emerging approaches to teaching lipreading to deaf and hard-of-hearing children and adults that lie on the analytic-synthetic continuum. This implies knowledge about the materials and aids to teaching available through the audio-visual-kinesthetic, the Jena, the Müller-Walle, the Nitchie, the Kinzie, and other approaches.

VISION

In concluding our discussion of the required knowledge in the area of communication, we should mention the need for the teacher to have insights into the problem of visual perception, since the deaf child is likely to receive the major portion of this information through vision. Such topics as span of perception, fluctuations of perception, grouping of stimuli, influence of context, and precision of perception are relevant to an understanding of the visual tasks confronting the deaf child.

The teacher must then be able to assess lipreading ability, to evaluate formal tests of lipreading ability, to plan a program of growth in skill in lipreading appropriate to the child's level of language and educational development, to adapt eclectically instructional procedures derived from frequently practiced ap-

proaches, and to create suitable motivating devices and situations that further growth in lipreading skill.

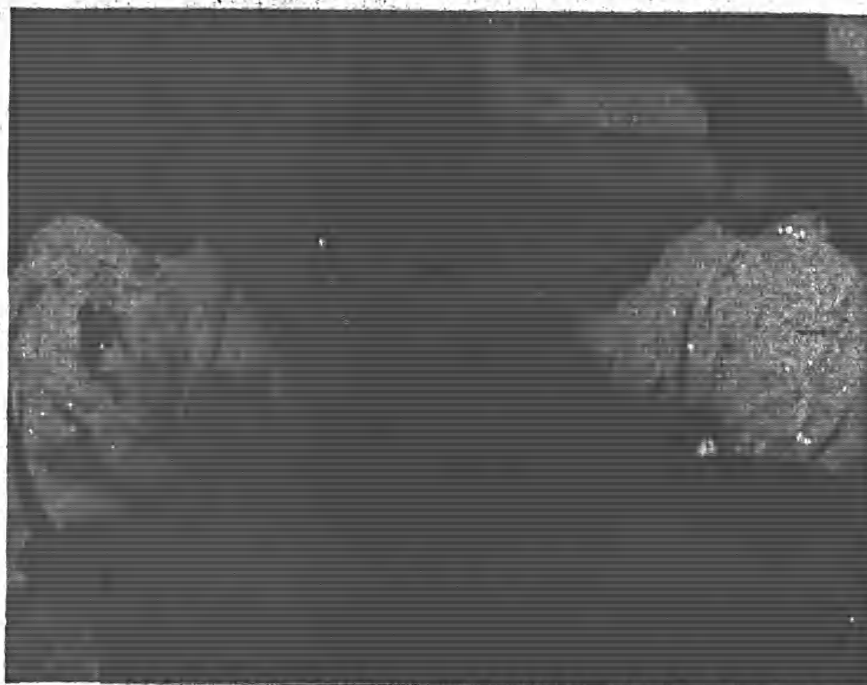
CURRICULAR ADAPTATIONS

Curricular adaptations involve the knowledge and skills necessary for adapting reasonably well-accepted curricula for the hearing to the needs of deaf children. It is assumed that the teacher has been introduced to the various philosophies of education (realism, idealism, experimentalism) which underlie determination of the content of the curriculum. Under recommended information about the curriculum the following topics will be considered: (1) general adaptations, (2) reading, and (3) subject-matter areas.

General adaptations.—The teacher must be familiar with techniques of dealing with the commonly encountered academic "retardation" resulting from lagging development of skills of communication; for example, the heavy vocabulary loads and complex language structure contained in "subject-matter" materials of instruction. In general, this means the teacher must know the techniques for adapting the curriculum to the appropriate conceptual and verbal levels of deaf children of all ages. Obviously she must possess information about teaching materials suitable for the deaf child.

Reading.—Reading is mentioned particularly because it pervades the entire curriculum (it could have been included under communication) and because it is likely that the deaf child and adult are relatively more dependent for information on the printed symbol than the hearing. The teacher must be keenly aware of the concept of readiness as it relates to the time for beginning reading and for determining appropriate language maturity and preparation for reading at all levels. She must also be familiar with techniques for the day to day evaluation of reading progress and ways for the detection of emerging difficulties in reading. We recommend that the teacher know the various, though differing, techniques for developing the basic reading skills, such as word recognition, sentence interpretation, and paragraph meaning. Of course, there must be a critical sensitivity and knowledge of the conflicting opinions and evidences about silent and oral reading for the deaf.

Subject-matter areas.—The teacher must know the techniques of adapting rather abstract concepts to the child's ability to verbal-



*Courtesy, Los Angeles City Schools,
Special Education Section*

Deaf Children Enjoy Finger Painting as Part of Their Nursery School Program.

ize; for example, concepts of space, time, natural and social forces in the social studies and in science. In arithmetic there is the particular need to know about relating computational skills to problems involving complex language. It is desirable that the teacher know about arts and crafts for various levels and that she familiarize herself with the activities of specialists in music, physical and health education, home economics, manual arts, and vocational training for the deaf.

The teacher, in short, should be able to select teaching material and content appropriate to the child's level of maturity and to adapt that material and content to the requirements of the child's limitations of communication. She should be able to use mechanical aids to instruction such as projectors and models.

PSYCHOLOGICAL TESTS AND MEASUREMENTS

The teacher should have an understanding of the manner in which exceptional children of all types deviate with particular emphasis on how a second handicap added to deafness affects a child's development. Specifically in the area of psychological tests and measurements, the teacher needs to know (1) basic information relating to tests and measurements, (2) information relating to tests and measurements for the deaf.

Basic information.—Knowledge of elementary statistical concepts such as frequency distributions, measures of central tendency, measures of variability, and coefficients of correlation is recommended.

Tests and measurements for the deaf.—The teacher needs to be familiar with the evaluation, interpretation, and limitations of intelligence, personality, aptitude, achievement, social maturity, and diagnostic tests and measurements used with the deaf, particularly where language is involved. She should know about tests and test items that have been useful with the deaf; for example, in intelligence testing—the Hiskey, the Ontario, the Kohs Block Design, the Goodenough, the Leiter, the Randall's Island, and other instruments.

From her knowledge of and sensitivity to psychological tests and measurements the teacher should develop the ability to recognize multiple handicaps, to suggest and to carry out within reasonable limitations a program for dealing with the additional handicap, to evaluate critically scientific studies related to the education of the deaf that use statistical methods, to interpret intelligently and constructively the reports of psychologists and counselors, etc., to implement the latter's suggestions for guidance, and to assist in the administration of tests requiring her cooperation.

SOCIAL ADJUSTMENTS

It is essential for the teacher to know the problems and mechanisms relating to the adjustment of deaf children and adults to their families and communities. She must have information about (1) the social limitations imposed by deafness, and (2) the techniques and resources for facilitating adjustment.

The social limitations imposed by deafness.—The teacher needs to have knowledge of desirable occupations for the deaf, of insurance practices and legislation as they affect the deaf, of the implications of what amounts to minority group status through segregation in special schools and classes, of the effects of isolation from other deaf people, of the problems connected with religious needs and with certain types of recreation, and of the misunderstandings of the general public about the capabilities and aspirations of the deaf.

Facilitating adjustment.—The teacher should know ways of assessing the child's status in his family and in his community,

and she should be familiar with the local and national agencies and groups that can assist through literature and direct programs in the adjustment process. These include the Volta Bureau, the National Association of the Deaf, local religious and fraternal organizations, offices of vocational rehabilitation, and others.

The teacher should be able to participate congenially in extramural activities of the deaf, to interpret to the deaf their possibilities in society, to establish professional public relations with outside agencies and interpret the deaf child to them, to impart interpretive information about the deaf to laymen and the child's associates in the community, and to offer basic guidance to parents related to the child's social adjustments, present and future.

HOME-SCHOOL RELATIONS

The rich possibilities for furthering the development of deaf children inherent in well-conceived home-school relations suggest that the teacher be equipped with (1) general knowledge of home-school relations, and (2) techniques and resources for furthering home-school relations.

General knowledge of home-school relations.—It is desirable for the teacher to know the role the parents can take in augmenting and enriching the educational program of the school, the factors determining the extent of effectiveness of a parent-supplemented program, and the unique psychological, educational, and sociological problems faced by parents of deaf children.

Techniques and resources for home-school relations.—The teacher needs to be familiar with the various procedures that have been found useful in promoting home-school relations. These include group discussions, lectures, demonstrations, correspondence, appropriate publications, formal parent institutes and clinics, home and school visits. She should know the peripheral professional resources available to guide parents in cooperation with the school such as otologists, pediatricians, psychiatrists, psychologists, and social workers.

The teacher's awareness of constructive home-school relations should enable her to plan and to implement a program with parents to meet their needs in understanding the problems of their deaf children at all age levels, to make optimum use of community resources in parental guidance, to translate and interpret when the occasion warrants professional knowledge and

attitudes about the education of the deaf so that they have meaning and significance for parents.

PHILOSOPHY OF EDUCATION OF THE DEAF

In the broad area of the philosophy of education of the deaf the teacher should know (1) the historical evolution of modern approaches, (2) organization and administration, and (3) current issues and trends.

Historical evolution of modern approaches.—It is desirable for the teacher to be familiar with the sporadic period in the education of the deaf which led to the so-called French and German systems (with variants) and their influence on the rise of the education of the deaf in the United States. It is important to know about the influence of significant persons such as the Gallaudets, Fuller, Yale, Bell, and Goldstein on the evolution of various approaches to the deaf and their philosophical implications in terms of setting educational goals.

Organization and administration.—The teacher must know the types of organization and administration related to public residential schools, various types of day schools and parochial and private schools, including an understanding of the common legislation affecting the education of the deaf.

Current issues and trends.—The education of deaf children, as of all children, is constantly undergoing critical examination and evaluation by individuals and groups within, peripheral to, and outside the profession. The teacher of the deaf needs to be thoroughly familiar with the issues and trends that emerge from this process. At the time of writing this report some of these were the "oral-manual-combined" issue, the rise of the preschool movement, the role of the university and hospital speech and hearing clinic, the use of group and individual hearing aids, the education of the deaf with hearing children, the relative merits of day and residential schools, and the competencies required for teachers of deaf children.

The teacher must be able to examine critically the contribution of the past and current issues and trends in order to formulate an adequate set of principles to guide her in the instruction of deaf children. Furthermore, she herself may be able to create and to initiate constructive principles and the techniques which stem from them.

[End of Committee Report]

SUMMARY OF OPINIONS OF THE 100 TEACHERS AND THE COMMITTEE OF EXPERTS

While the opinions of the 100 teachers and the committee of experts, because of the way in which data were collected, do not lend themselves to precise comparison, some points of similarity and difference are readily observed. It is to be recalled that the teachers did not develop the items used in the check list, but they did have opportunity to evaluate these competencies for relative importance. The committee, quite independently of the teachers, had a different opportunity. They described without reference to existing professional standards what they regarded to be important competencies for teachers of deaf children.

Both teachers and committee members set the standards high. Both groups portrayed the teacher of the deaf as a person with extensive technical competence in teaching speech and language. Both groups placed a high value on the ability to develop and maintain communication skills in deaf children, to plan and develop curriculum, and to use special teaching methods suited to the individual child. Both emphasized the importance of aiding in the personal adjustment of the child and in maintaining good home-school relationships.

They differed somewhat in their emphasis on ability to teach children with multiple handicaps and the ability to use tests, records, and reports. The committee emphasized the *knowledge* competencies, while teachers tended to value more highly those which involve action or *ability* to do something. The competency committee, for example, specifically delineated many knowledges as fundamental to the instruction of the child; many of these knowledges are in the area of communication and communication techniques.

The committee indicated that teachers should have knowledge of the nature of sound and the basic psycho-physical methods as they relate to such aspects of hearing as loudness or pitch. They specified an understanding of the principles of electrical amplification; a knowledge of the anatomy, physiology, and pathology of the auditory system; and a knowledge of "first aid" to hearing aids. In the teachers' list there were items describing two of these competencies. The teachers did not put a relatively high value on either of these. They rated a knowledge of the anatomy and physiology of the auditory system 53d in the list and ability to give "first aid" to hearing aids 71st in the list.

The committee would require a very broad, general background in education and teaching methods of *normal* children as a requisite for teaching the deaf. To illustrate, they placed emphasis on a wide knowledge of various methods of teaching children to read. The teachers did not have a chance to evaluate a comparable knowledge. They did, however, rate



Courtesy, John Tracy Clinic, Los Angeles.

Through Sight, Touch, and Amplified Sound, Child Is Being Taught Speech.

the importance of "a knowledge of methods and techniques of teaching normal children." While this was rated "important," it was still 45th on the list of 92 items (table 1).

Good home-school relationships were stressed by both groups, although they are not described in the same words. The committee used the terminology "home-school relationships"; items in the competency list which tend to show this kind of ability were stated more in terms of "helping the parent" or "helping the child and parent." Competencies of this nature were rated quite high by the teachers.

There was marked difference in the emphasis placed on technical literature and research studies. The committee placed primary importance on a knowledge of these in the belief that the teacher must be a well-informed "consumer" of these if she is to be a fully effective professional worker. The teachers, however, rated these items near the end of their list. This, along with some of the other points of difference, might be explored through further research.

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★ / SOME OPINIONS ON THE ★

★ PROFICIENCY OF TEACHERS ★

★ OF THE DEAF ★

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

HOW COMPETENT are teachers of the deaf? Obviously, no general answer can be given to such an all-encompassing question. In order to venture an answer as it would apply even to a local community, techniques other than those employed in this project would be required. Opinions were collected through this study, however, which reflect the thinking of educators concerning the proficiency of some teachers in this area. They provide some clues as to the competence of teachers of the deaf across the Nation and afford the persons responsible for pre-service or in-service professional training with some indication of those competencies which may need strengthening in their own teachers. The opinions reported came from the 100 superior teachers of the deaf, and from 105 of the State and local directors of special education participating in the study who had some responsibility for education of the deaf.

THE 100 TEACHERS MAKE A SELF-APPRAISAL

When the list of knowledges and abilities was presented to the 100 teachers, they were asked not only to rate the importance of the competencies, but also to appraise their own proficiency in each, using a scale of "good," "fair," or "not prepared." The rank order¹ of these ratings of self-competence, denoted by the symbol (SC), appears in parentheses following each item in table 1 beginning on page 7.

On 51 of the competency items, the teachers' self-appraisal was, on the average, "good";¹ on 36, "fair"; and on 5, "not prepared." Since these 100 teachers were regarded as *superior* teachers by their supervisors, it would seem natural that they should rate themselves "good" in a large proportion

¹ Rank order is determined from the average rating of proficiency of each item. An average rating of 3.94-4.33 was considered "good"; from 3.33-3.10, "fair"; and 2.00 or below, "not prepared." See Appendix C, page 60, for a more detailed explanation of statistical procedures used to determine average ratings and rank order. See also Appendix E, page 65, for additional information.

of the items; however, also because they are superior, definite conclusions regarding *all* teachers of the deaf should not be made on the basis of their evaluations. These evaluations do, however, suggest possible strengths and weaknesses in the competence of teachers of the deaf as a whole.

These self-competence ratings have added meaning when they are considered in relation to the importance of each competency item. In order to discover to what extent the participating teachers rated themselves "good" in those competencies which they evaluated as "very important," (and correspondingly less proficient in those of lesser importance), a random sampling of 10 competency items was analyzed for the relationship between each individual teacher's ratings of importance and of self-proficiency.² On these items, a moderate relationship was found. In other words, there did not seem to be a marked tendency for a teacher to rate herself "good" in a competency which she had evaluated as "very important."

When the *average* rating of importance was compared with the *average* rating of self-competence for each item, 31 of the competencies showed a difference which was statistically significant.³ These can be identified in table 1 by the symbol (sd). No attempt is made here to give the reasons for the variation between the ratings of proficiency and the ratings of importance, as it was not within the scope of the Study to identify them. Before full practical application of these data can be made, there should be more study and investigation of the underlying reasons. It is possible, for example, that a teacher may not need some of these competencies in certain school situations, or that other personnel perform some of the functions to which these competencies pertain.

On the 15 competency items which follow, the average ratings of proficiency were *less* than the average ratings of importance:

The ability to teach speech development and voice improvement to deaf pupils by one or more methods, such as the elements, syllables, whole words, kinesthetic and auditory methods. (I-2; SC-35)⁴

The ability to recognize possible causes of social, educational, and emotional maladjustments of deaf children, and to participate in planning courses of action aimed at alleviating these. (I-5; SC-22)

The ability to organize and develop a curriculum for deaf children, on the basis of their individual needs and potentialities. (I-8; SC-45)

The ability to help parents get information which will assist them in facing the problems arising from having a deaf child in the family. (I-9; SC-27)

² Co-variation was measured by the coefficient of contingency. The median coefficient of contingency on these 10 items was 0.31 with a range from 0.19 to 0.43. See Appendix C, page 63, for a description of the statistical procedures used.

³ Differences were considered to be significant if beyond the 0.01 level of confidence. See Appendix C, page 63, for a detailed description of the statistical procedures employed.

⁴ Refers to rank order of importance and rank order of self-competence, respectively. See table 1, page 7.

The ability to counsel deaf children with respect to their emotional problems and personal attitudes toward their handicap. (I-10; SC-29)

The ability to participate with other members of a professional team in helping parents with problems related to their deaf child's occupational placement. (I-25; SC-67)

The ability to teach auditory training by one or more methods, such as Goldstein's Acoustic Technique, and the Whitehurst Method. (I-27; SC-55)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in physical education. (I-29; SC-63)

The ability to counsel deaf children with respect to their vocational problems and life goals. (I-30; SC-57)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in domestic arts. (I-47; SC-88)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in industrial arts. (I-50; SC-91)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in arts and crafts. (I-59; SC-80)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in fine arts. (I-61; SC-83)

The ability to provide deaf pupils with opportunities in the curriculum for experiences in music. (I-64; SC-74)

A knowledge or understanding of methods and techniques of teaching the athetoid child. (I-85; SC-89)

These foregoing 15 items, for which the ratings of proficiency were comparatively *less* than the average ratings of importance, include some of the abilities most highly valued by the teachers. Among them were the ability to teach speech, to help children with their special problems resulting from deafness, to use special methods and techniques in planning an individualized curriculum for deaf children, and to work with parents and professional colleagues. Most of the others were concerned with the teachers' ability to provide experiences in the non-academic subjects such as industrial and fine arts.

The fact that superior teachers have indicated some lack of proficiency in these competencies may indicate a corresponding or even greater lack in most other teachers of the deaf. If this is true, it has implications for teachers themselves, as well as for directors, supervisors, and college personnel concerned with exceptional children. As the individual teacher sets her own professional goals, as directors consider in-service training projects, as college personnel plan programs of preparation, they may wish to give special attention to these 15 items, and above all, to those at the top of this list.

On the 15 competency items which follow, the average ratings of proficiency were *greater* than the average ratings of importance:

The ability to interpret educational programs for, and the problems and abilities of, the deaf to teachers of normally hearing children. (I-44; SC-12)

A knowledge or understanding of the purposes, services, and locations of national organizations concerned with the education or general welfare of the deaf, such as the International Council for Exceptional Children, the Alexander Graham Bell Association for the Deaf, and the Convention of American Instructors of the Deaf. (I-46; SC-15)

The ability to organize and carry out field trips. (I-48; SC-10)

The ability to work effectively with P. T. A., alumni groups, and other organizations associated with the school. (I-49; SC-24)

The ability to draw educational interpretations from reports of social workers. (I-51; SC-26)

A knowledge or understanding of the anatomy and physiology of hearing mechanisms. (I-53; SC-19)

The ability to interpret educational programs for, and the problems and abilities of, the deaf to non-professional school workers, such as bus attendants and school custodians. (I-57; SC-16)

A knowledge or understanding of the causes of the various types of hearing disability. (I-66; SC-46)

The ability to plan and carry out an assembly program. (I-72; SC-41)

A knowledge or understanding of the history of the education of the deaf. (I-73; SC-30)

The ability to administer to deaf children standardized group achievement tests. (I-76; SC-51)

The ability to administer to deaf children pure-tone audiometric tests. (I-78; SC-58)

The ability to teach a multi-grade class of deaf children. (I-79; SC-65)

The ability to read lips. (I-87; SC-68)

The ability to use the "manual" alphabet in teaching. (I-91; SC-84)

The ability to use "sign" language in teaching. (I-92; SC-67)

The fact that superior teachers rate themselves "good" in some competencies which they also rate of lower importance should probably be explored further to determine the reasons behind this variability. It is possible, for example, that some of these are functions which are performed by personnel other than teachers in many school systems. It may be that certain phases of college programs have received too much emphasis in relation to the total program.

It must be emphasized again that the reasons for these differences in average ratings of proficiency and importance of the 31 items are not known, and caution should be used when any action is taken as a result of these data.

DIRECTORS AND SUPERVISORS OF SPECIAL EDUCATION PROGRAMS GIVE SOME OPINIONS

Special educators giving leadership from State departments of education and from central offices of local school systems expressed opinions through inquiry forms concerning the professional competence of recently graduated teachers of the deaf working in their own school systems. While such opinions cannot be considered conclusive, they do provide clues to the ways teachers appear to be meeting the needs of deaf children, and therefore seems to have implications for both pre-service and in-service training programs.

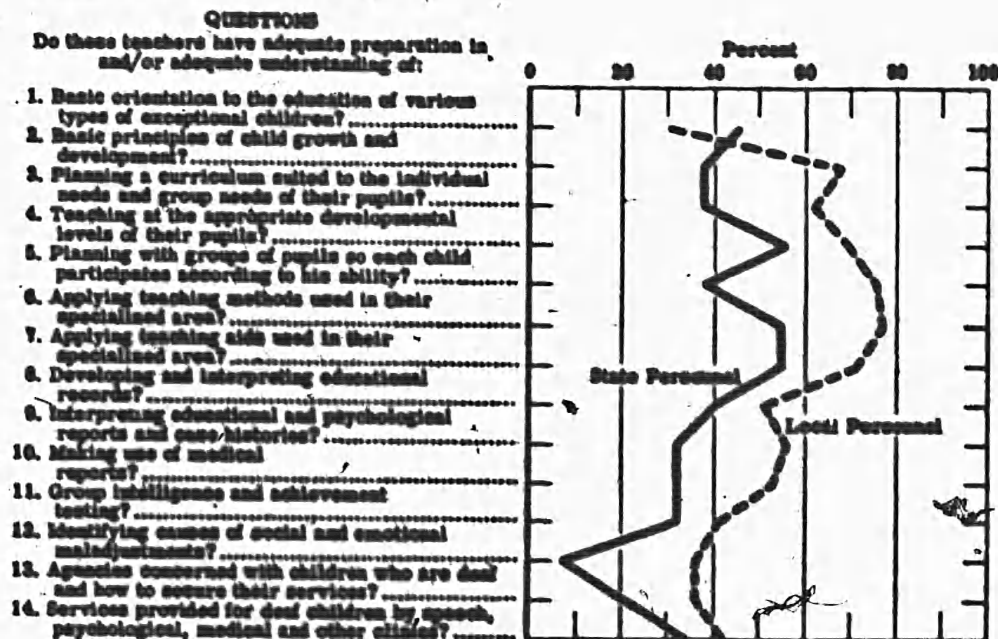


*Courtesy, Los Angeles City Schools,
Special Education Section*

Feeding the Turtle Is an Interesting Activity for These Deaf Children.

These opinions were given in response to a series of questions which, in abbreviated form, appear in graph 1. These State and local supervisors were requested to answer by "yes," "no," or "undecided." The graph shows only the percentage giving affirmative answers. Other replies were divided between negative and "undecided" responses. Some of the opinions reported in the graph will be discussed, but the reader will probably wish to make further interpretation from this pictorial representation.

Graph 1.—Percent of State and Local Personnel Indicating Satisfaction with the Competence of Recently Prepared Teachers of the Deaf in Their School Systems¹



¹ Many persons were undecided on these questions, so that the remaining percent is not necessarily negative. See Appendix E, page 88, for additional information.

There is considerable difference between the opinions of the special educators in State departments and those in local school systems. Directors and specialists in local school systems, as the graph shows, were more satisfied with the competence of teachers. As high a proportion as 76 percent of the local supervisors gave an affirmative reply to as many as two of the questions. On no one of these questions did more than 56 percent of the State people express satisfaction, and on one question less than 10 percent gave an affirmative answer.

One may well ask why there is such a difference in the opinions of special educators in State departments and special educators in local school systems. Do the two groups have different standards of evaluation? Do they have different groups of teachers in mind?

The questions reported in the graph, in general, centered around the same competencies that the teachers evaluated for importance, as reported in table 1, with the exception that there were no questions specifically on ability to teach language and communication to deaf pupils. The questions were concerned, in general, with the following competencies: understanding the deaf child; ability to plan curriculum; ability to use specialized methods and teaching aids, tests and records; and understanding the services offered by agencies and clinics.

As reference to the graph will show, questions 2 through 7 are chiefly concerned with understanding the child in relation to his handicap, and the ability to build a curriculum suited to the child's needs, plus those distinctive techniques and teaching methods which are necessary for instruction of the deaf. Between 62 percent and 77 percent of the local directors say they are satisfied with the competence of their teachers in these. State personnel again show much less satisfaction. Their approving replies range from only 38 percent to 56 percent on these six questions.

Questions 8 through 11 are concerned with the teacher's ability to interpret educational and psychological reports, case histories, medical reports, and group intelligence and achievement tests. The range of affirmative replies to these questions is from 32 percent to 56 percent. Not more than 40 percent of the State directors were satisfied with the teacher's ability in any of these competencies.

Question 12 is concerned with ability to diagnose causes of social and emotional maladjustment. Although the teachers have already indicated this to be an important competence (see table 1), less than 10 percent of the State directors believe teachers of the deaf are adequately qualified in this respect and only about 40 percent of the local directors are satisfied.

On the last two questions (13 and 14), neither the State nor local special educators would consider the proficiency of teachers of the deaf to be very high. The aim of question 13 was to get opinions about teacher understanding of agencies concerned with exceptional children. About 20 percent of the special educators in State departments gave an affirmative reply, and less than 40 percent of the special educators in local school systems were satisfied with the teacher's understanding of, or ability to utilize, community agencies. Number 14, the last question, was designed to bring opinions on the teacher's understanding of services offered by psychological, medical, and other clinics. Here again not more than 45 percent of either group felt that the recently graduated teachers had an adequate understanding of these services.

EDUCATION AND EXPERIENCE FOR ACQUIRING COMPETENCE

THIS PUBLICATION, thus far, has reported on competencies thought to be desirable for teachers of the deaf. If, as it is hoped, the most essential abilities and understandings have been emphasized, the next question is, "How may teachers acquire these fundamental competencies?" This question is posed by directors and supervisors of special education of State and local school systems, and by many other educators. One will ask, "What kind of education and experience will help give the teacher of deaf children the competence she most needs?" Another will query, "What experiences should I look for in the teacher-applicant?" Still another may ask, "What experiences should a school or school system give the teacher after she has become a member of the school staff? Are there in-service experiences as well as pre-service preparation which will help teachers to remain efficient and enthusiastic?" Some opinions were collected through the inquiry forms concerning the value of certain phases of professional preparation thought to contribute to successful teaching of exceptional children.

IMPRESSIONS ABOUT COLLEGE COURSES

Occasionally a comment is made to the effect that a college curriculum is "all theory and no practice." The 100 superior teachers of the deaf had a chance to express their views concerning the balance between *theory* and *practice* and the tendency for *overlap* in their specialized preparation. The questions¹ placed before these superior teachers and the proportion of answers are as follows:

Was there <i>too much</i> theory and <i>not enough</i> supervised practical experience?		
18% YES	78% NO	4% UNDECIDED
Was there <i>too much</i> supervised practical experience and <i>not enough</i> theory?		
4% YES	94% NO	2% UNDECIDED

¹ See Appendix D; EXC-4C, question 4.

It is evident that some thought there was too much theory, but there was almost universal agreement that there was *not* too much supervised practical experience.

Another common criticism of college curricula is that there is an undue amount of repetition and overlap in the content of courses. The 100 teachers of deaf children answered three questions which reflect their feeling about this matter. These, together with the percentage of replies, are as follows:

Was there an undue amount of repetition and overlapping of content in the *liberal arts and sciences courses*?

4% YES 87% NO 9% UNDECIDED

Was there an undue amount of repetition and overlapping of content in the *general teacher-education courses*?

22% YES 73% NO 5% UNDECIDED

Was there an undue amount of repetition and overlapping of content in the *specialized courses* in the education of deaf children?

13% YES 84% NO 3% UNDECIDED

As the replies indicate, these 100 teachers of the deaf had quite definite opinions on repetition and overlap in college courses. Relatively few of them were "undecided." In general, they were satisfied in a ratio of slightly more than 20 to 1 that general cultural courses were *not* repetitious. A much higher proportion of teachers believed, however, that there was repetition in general teacher-education courses. Here approximately one in four expressed this belief. When asked through the last question to express opinions about the repetition in their professional preparation in the education of the deaf, 84 percent of the teachers who rated the item indicated their courses were free from overlapping.

PRACTICAL EXPERIENCES IN PROFESSIONAL PREPARATION

How do teachers value some of the practical experiences which are usually included in teacher-education programs? A list of typical experiences was prepared for the inquiry forms and presented to the 100 teachers of the deaf for rating as to relative importance.² These items together with the teachers' evaluation may be found in table 2 on page 44. These center around supervised student teaching, planned observations, and experience in developing and interpreting tests and records

² See Appendix D; EXO-4C, question 5.

Table 2.—Teachers of Deaf Children Rate Importance of Some Practical Aspects of Professional Preparation

<i>Rank order¹ of import- ance</i>	<i>Practical Experiences</i>
<i>Items rated "VERY IMPORTANT"</i>	
1	Supervised student teaching of deaf children— in language development
2	in speech development and voice improvement
3	Supervised student teaching of a class of deaf children— at the elementary level
4	at the nursery school level
5	Supervised student teaching of deaf children— in lipreading (speechreading)
6	in the regular academic subjects
7	Student observation (without active participation) of teaching of deaf children
<i>Items rated "IMPORTANT"</i>	
8	Planned observation— in residential schools for deaf children
9	in day schools or classes for deaf children
10	Supervised student teaching of a class of deaf children at the secondary level
11	Experiences in developing or interpreting individual case records of deaf children
12	Planned observations of the work done by speech and hearing clinics
13	Planned observation— of conferences of teachers of the deaf on pupil placement, curriculum adjustment, child study, and so on
14	of children with multiple handicaps, including deafness
15	Planned observation of the work done by— rehabilitation centers for deaf youths and adults
16	otological clinics
17	Planned observation of multi-professional case conferences held by representatives from such fields as medicine, psychology, education, and social welfare, to study and make recommendations on individual deaf children
18* ²	Supervised student teaching of normally hearing children
19	Planned observation in schools or classes dealing with other kinds of handicapped children
20	Planned visits— to organizations interested in the general welfare of the deaf, such as the State Rehabilitation Agencies and the National Association for the Deaf
<i>Items rated "LESS IMPORTANT"</i>	
21	Planned visits to non-school community organizations interested in the deaf, such as recreation groups, clubs, and community houses
22	Planned observation of the work done by cerebral palsy clinics
23	Visits to the homes of deaf children in the company of supervising teachers

¹ Teachers rated the items as "very important," "important," "less important," or "not important." The rank order of importance is based on the average of these ratings. See Appendix C, page 65 for statistical procedures used.

² Day school teachers rated this experience significantly higher than residential school teachers. See Appendix E, page 85, for additional information.

Opinions as presented in table 2 go a step beyond the earlier efforts to identify and rate competencies. The teachers evaluated certain experiences which *aid* teachers in becoming competent. On the basis of average opinion, the superior teachers of deaf pupils seemed to value most highly various types of student teaching experiences. Next they emphasized the importance of certain planned observations and experience in developing and interpreting case records of deaf children. The experience which the superior teachers of the deaf valued least was "visits to the homes of deaf children in the company of supervising teachers." This may seem inconsistent in view of the emphasis teachers of the deaf placed on parent-teacher relationships. It may be that their rating of this as a student teaching function was low because they have not had this kind of experience in their professional preparation, or because they do not regard this as a practical way of developing competence in home-school relationships.



*Courtesy, Los Angeles City Schools and
Los Angeles Examiner*

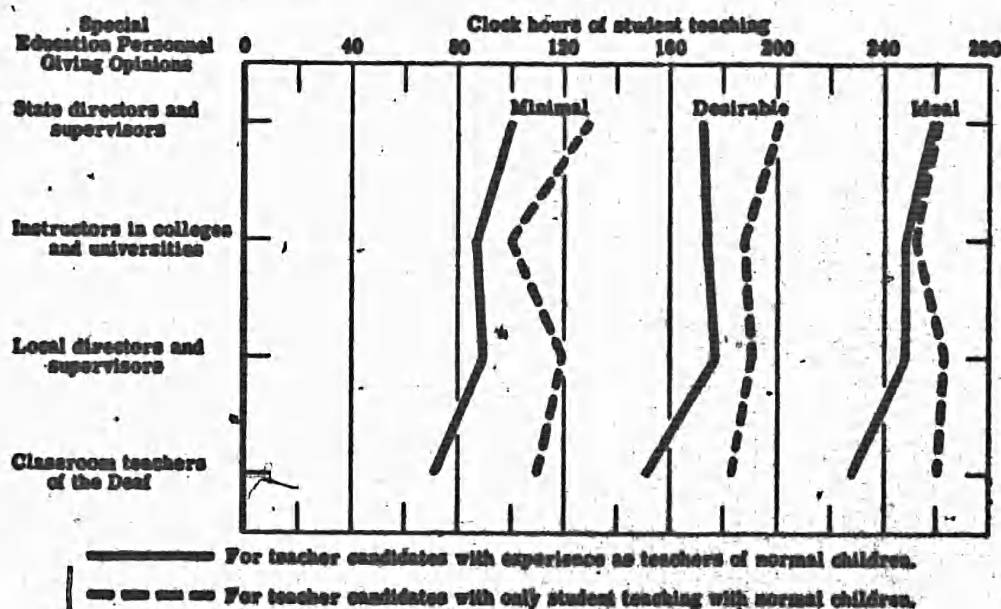
The Wonder of Sound.

STUDENT TEACHING WITH DEAF PUPILS

As has just been pointed out, the 100 superior teachers of the deaf rated nearly all of the student teaching experiences at the top of the list.

Even so, there is considerable variation in the value which they placed on different kinds of student teaching experiences. To illustrate, student teaching in language development [1] and speech development [2] were at the top of the list. In fact, not one day school teacher rated these experiences as less than "very important." Next, they valued student teaching at the elementary [3] and nursery school levels [4]. These teachers of the deaf, along with teachers of the hard-of-hearing, were the only teachers in the entire study who felt that student teaching at the nursery school level was "very important." They were more nearly in agreement with the other teachers when they said that student teaching at the elementary level was "very important" and at the secondary level "important." Teachers of the deaf rated the experience of student teaching in lipreading [5] and in regular academic subjects [6] as "very important." See table 2.

Graph 2.—Amount of Student Teaching With Deaf Children Considered Minimal, Desirable, and Ideal for Teachers of the Deaf as Rated by Special Education Personnel.



Granted that teachers rated student teaching at the top of a list of practical experiences, and that they chose different types of student teaching for relative importance, there is still another question. How much specialized student teaching should be considered "minimal," "desirable," and "ideal"? Answers to this question are based not only on opinions of the 100 superior teachers of the deaf, but also on opinions supplied by three other groups of special educators who had given information through inquiry forms.³ These other groups were: directors and supervisors in

³ See Appendix D: EXC-4C, question 14.2.

State and local departments of education, and instructors in colleges and universities. The opinions of all four groups are reported in graph 2.

These special educators expressed their opinions about the minimal, desirable, and ideal student teaching requirements⁴ for two types of teacher candidates: (1) those candidates who have already had on-the-job teaching experience with normal children, and (2) those candidates who have had only student teaching experience with normal children.

It is clearly seen that all groups of special educators would require less student teaching of deaf children for the first candidate than the second; the average number of clock hours considered "desirable" for those with experience as teachers of normal children ranged from 150 to 175, and for those with only student teaching experience the range was 185 to 200.

TEACHING EXPERIENCE WITH NORMALLY HEARING CHILDREN

Should teaching experience with normally hearing children be a prerequisite experience for a person entering the field of teaching the deaf? If so, how essential is it? If it is essential, how long should such a teacher work with normal boys and girls? It will be recalled that supervised student teaching of normal children was included as one of the experiences listed in table 2 on page 44. It was ranked 18th in the list of 23 experiences by the 100 teachers of the deaf. These teachers rated this practical experience lower than any other special education teachers participating in the study. Possibly this was due to the opinions of residential teachers who considered it less important than did the day school teachers.

The 100 teachers of the deaf, as well as others participating in the study, gave opinions through inquiry forms concerning the amount of regular classroom experience that should be a prerequisite to teaching deaf children. They did this by checking the amount they regarded to be "minimal," "desirable," and "ideal."⁵

What do teachers of the deaf, their State and local supervisors, and their college professors, think about the value of teaching so-called normal children as a prerequisite to instruction of deaf boys and girls? All agree, by their ratings, that it has value. The amount thought to be minimal, desirable, and ideal, however, is a matter on which they did not fully agree.

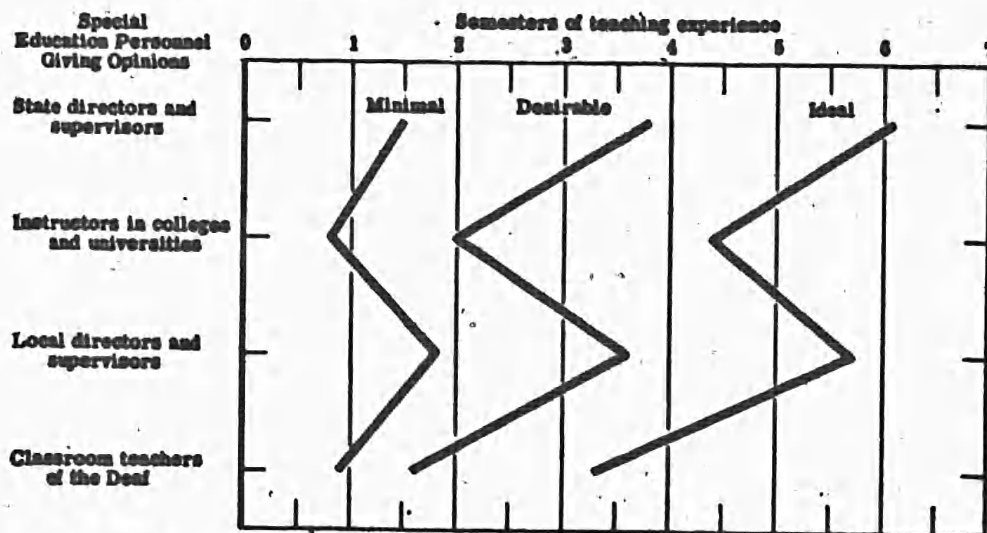
The reader will find in graph 3 on page 48 the average (median) amounts

⁴ These statements concerning minimal, desirable, ideal requirements are based on the average (median) opinion of each group of special educators. Individual respondents actually were given a choice of four 75-hour intervals ranging from 1 to 300. Although the choices of "none" and "more than 300" were also given, very few persons indicated these in their replies. See Appendix E, page 58, for exact medians and additional table showing percent of each group indicating number of clock hours.

⁵ See Appendix D: EKO-40, question 14.1.

of such experience (in semesters) regarded as minimal, desirable, and ideal by each of the four groups of special education personnel.⁶ The first thing one sees in graph 3 is that both the State and local directors and supervisors of special education would like teachers of the deaf to have more experience in teaching normal children than the teachers themselves. College professors and instructors, however, tend to agree more with the classroom teachers of the deaf.

Graph 3.—Amount of Classroom Teaching Experience With Normal Children Considered Minimal, Desirable, and Ideal,¹ As Rated by Special Education Personnel.



¹ Minimal, desirable, and ideal requirements are based on the average (median) opinion of each group of special educators. Individual respondents were given a choice which ranged from 1 semester of half-time student-teaching with normal children to 3 years of on-the-job classroom teaching with normal children. Less than 2 semesters refers to student teaching; more than 2 semesters refers to on-the-job classroom teaching experience.

Some other things are shown in this graph. The amount of teaching experience with normal children which teachers of the deaf would regard as ideal is less than the State and local supervisors would regard as desirable. Several questions can be raised here which might form the basis for further exploration. Do the average opinions of these 100 superior teachers suggest that they may regard teaching with normal children as of relatively little value? This question could well be raised since supervisors, both at the State and local level, would definitely require more classroom teaching with normal boys and girls than would the 100 teachers of the deaf. Does this relatively small amount chosen by the college special education personnel as minimal and desirable indicate that they, too, are not fully convinced of the values of general teaching experience?

⁶ Discretion should be used in interpreting these averages since there was a wide variability of opinion as is shown by Table 2, Appendix C, page 52.

PROFESSIONAL BACKGROUND FOR TEACHER CANDIDATES MOST LIKELY TO SUCCEED

Recognizing that instruction of the deaf is a complex process involving many special knowledges and techniques, some people believe it is necessary for teachers in this area to have graduate preparation. It is through extensive college courses, professional observations and experiences, student teaching, and on-the-job classroom teaching with both normally hearing and deaf children that the teacher acquires many of these special knowledges and skills. It may be that in order to have all of these experiences, more than 4 years of college would be required.

On the hypothesis that certain combinations of academic preparation and experience tend to contribute to success in teaching, an item was included on the Inquiry Form which described six hypothetical candidates with different combinations of academic preparation and experience. Those directors and supervisors in State and local school systems and college instructors with responsibility in the area of the deaf were asked to choose the two most likely to succeed as teachers of deaf children.

One or more of the following elements were included in each of the six combinations: (1) graduate or undergraduate level of study, (2) general teacher preparation (including student teaching), (3) specialized preparation (including student teaching), and (4) teaching experience. The descriptions of the six hypothetical candidates and the percentage¹ of participants selecting the candidates most likely to succeed are:

Candidates

	Percent ²
A 1-year graduate program of specialized preparation (including student teaching in the area of specialization) for experienced regular teachers holding a bachelor's degree in general teacher education; teaching experience with <i>normal</i> children only.....	80
A 1-year graduate program of specialized preparation (including student teaching in the area of specialization) immediately following the completion of a bachelor's program in general teacher education; <i>no</i> teaching experience with <i>normal</i> or <i>exceptional</i> children.....	52
A 4-year undergraduate program of specialized preparation (including student teaching with normal and exceptional children); <i>no</i> teaching experience with <i>normal</i> or <i>exceptional</i> children.....	23
A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with <i>normal</i> and <i>exceptional</i> children.....	18
A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with <i>normal</i> children only.....	2
A bachelor's degree in general teacher education (including student teaching of normal children); no specialized preparation; <i>no</i> teaching experience with either <i>normal</i> or <i>exceptional</i> children.....	1

¹ Since the views of the three groups were so similar, the data were pooled.

² Percent add to more than 100 since each person was allowed two choices.

Eighty percent of all the special education personnel selected the candidate holding a regular teaching credential, with experience in teaching normal children, *plus* a year of graduate specialized preparation in teaching the deaf. The second choice went to a person with the same qualifications but with *no* teaching experience.

The choices of hypothetical candidates most likely to succeed suggest that the educators rating them believe that there is need of at least 1 year of specialized preparation at the graduate level. As one reviews the choices made from this list, there are numerous interpretations which the reader may wish to make for himself.

Some factual information on the academic level of preparation of teachers of the deaf is available for the year 1953-54. Colleges and universities with specialized curricula reporting in the broad study gave statistics on: (1) the number of students majoring at the undergraduate and graduate levels in each area in which a sequence of preparation was offered, and (2) the number of degrees granted in the various areas of special education at the undergraduate and graduate levels. While statistics were not received for all the colleges, they were provided for 4,601 students majoring in special education. Of this number, 195 were reported to be majoring in the area of the deaf during the year 1953-54. More than half of these (104 at the Master's level and 9 at the Doctoral level) were graduate students. During the calendar year 1953, the same colleges reported that 67 degrees were granted to students majoring in the area of the deaf. Of this number, 37 earned the Bachelor's degree; 30 the Master's degree. No Doctoral degrees were reported.

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SUMMARY AND IMPLICATIONS

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THE INFORMATION reported in this publication was obtained through an exploratory, opinion-type of study, directed toward the identification and description of some of the factors which make a teacher of the deaf successful, and ultimately toward the improvement of professional standards of preparation and achievement. The findings of the report are based on opinions gathered from teachers, college instructors, and administrators and supervisors working throughout the Nation in the field of the education of the deaf.¹ The validity of the findings rests mainly on the expertness of these participants who, because of their broad experience and preparation, were recognized as qualified to express opinions based on sound judgment.

It is hoped that this report will be of use to persons in the many aspects of special education as they seek to improve professional standards. As research in the scientific and social aspects of deafness increases, changes in knowledges, practices, and attitudes will continue to occur. It is therefore hoped that in the years to come standards for teachers of the deaf will keep pace with these changes and with the educational implications of the findings of future studies.

FINDINGS

- ★ Teachers of the deaf need many distinctive knowledges, skills, and abilities, in addition to those required by regular classroom teachers. Both the 100 superior teachers of the deaf and the committee of experts portray the successful teacher as one who has a wide range of specialized competencies. Both emphasized the ability to develop speech and language in the deaf child, to develop curriculum, to use specialized teaching methods, to aid in the personal adjustment of the child to his handi-

¹ 100 teachers of the deaf, 60 directors and supervisors working in State departments of education, 60 directors and supervisors in local school systems, and 57 college instructors contributed opinions.

cap, and to maintain good home-school relations. In general, the committee tended to emphasize more the technical *knowledge*, while the teachers themselves placed a higher premium on *abilities* to do things.

- ★ The teacher of the deaf, according to the committee of experts, must have a particular ability to integrate and unify all of these special functions if the instructional program for the deaf child is to be fully effective.
- ★ The list of 92 competencies, presented in Table 1 and evaluated by the 100 superior teachers of the deaf, appears to be a valuable one, since the majority of the items received an average rating of either "very important" or "important."
- ★ There was a difference of opinion between day and residential school teachers of the deaf concerning the relative importance of 15 of the competencies which they evaluated. The day school teachers attached a higher importance than did the residential school teachers to all but two of the items.
- ★ The evaluations of the 92 competency items by teachers who received their professional preparation prior to January 1, 1946, showed no significant differences from those of the teachers who received their preparation after that date.
- ★ Teachers of the deaf should have special personality characteristics. These, according to most of the participants in the Study, may be different in degree or in kind from those required by the regular classroom teacher. Through teacher comments many of these characteristics were identified.
- ★ Teachers rated their own ability in each of the 92 items which they had evaluated for importance; on more than half, they rated themselves "good"; on the majority of the rest, "fair." On 31 of these items, there was found to be a difference which was statistically significant between their average ratings of importance and self-proficiency. In 15 of these, importance was comparatively greater than proficiency; in the others, the reverse was true.
- ★ Both State and local leaders in special education also gave opinions on teacher effectiveness. In general, only about half of them seemed to be satisfied with the competence of recently prepared teachers in their school systems; directors and supervisors in local school systems were more nearly satisfied than those working in State Departments of Education.
- ★ Teachers of the deaf emphasized the importance of practical experiences as well as theory in their professional preparation. These experiences should include student teaching with deaf children in various school situations and at different grade levels, and planned observations in speech and hearing clinics and in schools and classes for the deaf. While teachers also felt that teaching experience with normally hearing children was important, this experience was relatively less valued.

IMPLICATIONS

These findings have implications for the teacher herself, for administrators and supervisors of programs for the education of the deaf; for colleges and universities offering sequences of preparation for such teachers, and for organizations concerned with professional standards.

It is in the *teacher herself* that the dynamic power for development of competencies resides. From the time she chooses a plan of professional preparation in the specialized field, she herself will largely determine her own professional growth. As she seeks new knowledges and skills, she will look for standards against which to measure her progress. Assuming that competencies needed by superior teachers of the deaf have been at least partially identified in this report she will find herein one basis for the selection of personal goals and for self-evaluation.

State and local school systems, through the leadership of mature and able administrators and supervisors, have the responsibility not only to select teachers but also to provide opportunities for their continual development. In-service programs should include professional study through workshops and institutes, and the provision of a library well stocked with literature and research findings, as well as opportunity to work with parents and representatives of agencies in the community who are concerned with the deaf. A good school program will enable the teacher to continue to gain new knowledge about techniques of communication useful in instructing the deaf, about medical and health conditions related to this ability, methods of instruction, child growth and development with emphasis on the effect of deafness in such development, and community resources. Those who administer or supervise State or local programs have an obligation to foster the greatest possible development of their teachers in service.

Heavy demands are placed on the *colleges and universities* offering a sequence of preparation in the area of the deaf. Because the instruction of the deaf is one of the more technical fields, and because of the special knowledge, ability, and personal characteristics pointed out as essential for teachers of the deaf, the college has several obligations. The application of the most modern information on standards to college curricula could be expected to have a significant and almost immediate effect on the qualifications of teachers, and consequently on the instruction of deaf children.

First, colleges and universities should make a careful selection of teacher candidates in order to assure that the educational effort be invested in a person with good potential. Second, the college must have a staff qualified to give the theoretical courses and to supervise the necessary practice teaching and observations. This means that the teaching staff should have a background in the education of the deaf and that additional staff must be available to offer medical background information and the knowledge necessary to understand communication in all of its ramifications. It

means, too, that an adequate program of teacher education can be conducted only in communities with resources which include extensive and varied opportunities for student teaching and opportunities for a variety of planned observations in schools, clinics, medical centers, and agencies serving the deaf.

Because teachers of the deaf are more difficult to secure than any other in the field of special education, and because their preparation is relatively expensive, it would seem that additional scholarships should be made available to those wishing to teach the deaf, to work in State departments of education, or to direct university programs for such teachers.

Organizations concerned with professional standards could well be influenced by the findings in this study, since all those participating identified, described, and to some extent evaluated for importance many distinctive competencies needed by teachers of the deaf. It would seem that professional standards should be set in such a way that they become a somewhat precise instrument for the selection and qualification of teachers with such knowledges, abilities, and personal characteristics.

SUGGESTIONS FOR FURTHER RESEARCH

1. THE VALUE OF EXPERIENCE IN TEACHING NORMAL CHILDREN AS A PREREQUISITE FOR TEACHING THE DEAF (This should be studied further since teachers of the deaf placed a relatively low value on such experience).
2. COMMUNITY RESOURCES NEEDED FOR AN ADEQUATE PROGRAM OF PREPARATION FOR TEACHERS OF THE DEAF (This should be based on the enrollment of students in the particular college or university).
3. COMPETENCIES AND PREPARATION NEEDED BY TEACHERS IN DAY AND RESIDENTIAL SCHOOLS: SIMILARITIES AND DIFFERENCES (The purpose of this research would be to discover the reasons for the significantly different evaluations of the list of competencies by the two groups of teachers).
4. DISTINCTIVE PERSONAL CHARACTERISTICS NEEDED IN WORKING WITH DEAF CHILDREN (This new research would either verify or invalidate teacher opinion in the present study).
5. THE RESPONSIBILITY OF THE TEACHER OF THE DEAF IN THE EDUCATION OF CHILDREN WITH MULTIPLE HANDICAPS (In the present Study, teachers of the deaf placed a relatively low value on the ability to teach deaf children who had multiple handicaps; yet many physically handicapped children do have more than one disability).
6. THE PROFICIENCY OF TEACHERS OF THE DEAF IN RELATION TO COMPETENCIES NEEDED BY THEM (The purpose of this research would be to study the reasons for the significant differences between the teachers' ratings of importance and ratings of self-competence on 31 of the competency items).

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★ APPENDIX A. ★

★ The Office of Education Study ★

★ "Qualification and Preparation of Teachers ★

★ of Exceptional Children" ★

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THIS PROJECT was undertaken by the Office of Education, in collaboration with many leaders in special education from all parts of the Nation, and with the assistance of the Association for the Aid of Crippled Children of New York City. It was directed by a member of the Office who was counseled by two committees. One was an *Office of Education Policy Committee* it was the function of this group to assist the director in management and personnel aspects of the Study. The other was a *National Committee* of leaders in special education from various parts of the United States; it was the function of this group to help identify the problems, to assist in the development of the design of the study, and to otherwise facilitate the project. The study also had the counsel of a number of consultants who reviewed written material and made suggestions as to personnel and procedures. (A complete list of these committee members and consultants appears on pages III and IV.)

The general purpose of the study was to learn more about the qualification, distinctive competencies, and specialized preparation needed by teachers of handicapped and gifted pupils. The term "teachers" was interpreted broadly to mean not only classroom instructors of the various types of exceptional children, but also directors and specialists in State and local school systems, and professors of special education in colleges and universities. A separate study was made of the qualification and preparation needed by teachers of children who are: (1) blind, (2) crippled, (3) deaf, (4) gifted, (5) hard-of-hearing, (6) mentally retarded, (7) partially seeing, (8) socially and emotionally maladjusted, (9) speech-handicapped, and (10) handicapped by special health problems, such as rheumatic fever. Study was also made of special education administrative and supervisory personnel (11) in State departments of education, (12) in central offices of local school systems, and (13) instructors in colleges and universities preparing teachers of exceptional children. Thus, incorporated into the broad study were 13 smaller studies.

Two techniques were used to gather data in the study of the qualification and preparation needed by special education personnel. One was by means of a series of *inquiry forms*; the other was through a *committee statement* describing desirable competencies. The plan of the study also included provision for conferences where practical and possible.

Through the series of inquiry forms, facts and opinions were collected from superior teachers in each of the 10 areas of exceptionality listed, as well as from directors and supervisors of special education in State and local school systems and from college instructors of special education. By means of the questionnaires, personnel in each of the areas of special education had opportunity to express their views on the distinctive skills, competencies, and experiences which they consider basic for educators in their area of specialization. Through the inquiry forms, status information was also gathered on certification requirements of State departments of education for teachers of exceptional children, and on existing teacher-education programs for the preparation of these teachers.

Through the committee technique, reports were prepared on the distinctive competencies required by educators in areas paralleling those studied through inquiry forms. There were 13 such committees in all. The names of these committee members were proposed by the National Committee, and the chairmen were appointed by the U. S. Commissioner of Education. Committees were composed of from 6 to 12 leading educators in their area of interest who, insofar as possible, had engaged in college teaching, had held supervisory positions in State or local school systems, and who had classroom teaching experience with exceptional children.

Three major conferences on the study were called. In September 1952, private agencies interested in gifted and handicapped children met with the Office of Education staff and the National Committee. In March 1953 the Commissioner of Education called a 3-day working conference on the distinctive competencies required by special educators. One hundred and fifty persons from many States were present. In October 1954, a long-anticipated week's work conference was convened in Washington, when working papers incorporating all data collected were presented, reviewed, and modified. The occasion provided opportunity for a free exchange of views, and for analysis and interpretation of data.

The findings coming from this study, and representing the point of view of no single individual or agency will, it is hoped, contribute effectively toward the goal of increasing the number of competent personnel.

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★ APPENDIX B. ★

★ Background Information ★

★ on the 100 Teachers of ★

★ Deaf Children ★

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THE READER may want to know something about the school situations in which the 100 superior classroom teachers of the deaf were employed, since opinions are likely to be influenced by such factors as the type of school organization in which teachers were employed or the grade level at which they were working. Background information is presented here, but should be interpreted with extreme caution. It is not intended that it should have any program implications, for it was not within the scope of this project to study programs for the education of deaf children.

The 100 classroom teachers of the deaf were working in the following types of school organizations:

Type of school organization	Total number of teachers	Number of day school teachers		Number of residential school teachers	
		With preparation before 1946	With preparation since 1946	With preparation before 1946	With preparation since 1946
Total	100	20	20	45	15
Residential school for deaf children	60	.....	.....	45	15
Special day school for deaf children only	12	6	6	.....	.....
Center of two or more special classes for deaf children in a regular day school	23	11	12	.....	.....
Single special class for deaf children in a regular day school	5	3	2	.....	.....

According to the teachers' reports, many were teaching at more than one educational level. Some were teaching both preschool and elementary, others were teaching both elementary and secondary. They reported the following responsibilities:

Level	Total	Number of—	
		Day school teachers checking	Residential school teachers checking
Preschool	22	13	9
Elementary	73	27	46
Secondary	23	8	15

The 100 teachers made a report on their own auditory acuity. They did this by checking the following on the inquiry form: "Indicate your auditory acuity by checking one of the following: ____ Normal hearing, ____ Hard-of-hearing, ____ Deaf." All of the teachers replied to this question. Their report, classified as to day and residential teachers, is as follows:

Auditory acuity	Total	Number of—	
		Day school teachers	Residential school teachers
Normal hearing	93	40	53
Hard-of-hearing	4		4
Deaf	3		3

Of the 100 teachers of the deaf participating in this study, 27 had received the major part of their professional preparation at the graduate level, 34 at the undergraduate level, and 39 in a residential school with no college credit.

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★ APPENDIX C. ★

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★ Information on Statistical ★

★ Procedures and Results ★

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SAMPLING PROCEDURE

THE DESIGN of the study called for 100 superior classroom teachers of the deaf to supply facts and opinions through inquiry forms. An effort was made to secure a representative sampling of superior teachers throughout the Nation by establishing a quota for each State and by providing guidelines for the selection of teachers within each State. State quotas were based on such factors as child population and special educational facilities within the States. In order to obtain 100 completed inquiry forms from teachers who would meet the standards set by the study, it was decided to compile a list of approximately 200 teachers. State Departments of Education submitted the names and addresses of 233 teachers of deaf children. Inquiry forms were mailed to all of these; 139 completed forms were returned. Not all were usable since some respondents were in administrative capacities rather than teaching, or did not otherwise meet the standards for participation in the study.

The guidelines for the selection of teachers in each State not only specified that they be superior, but also that they be representative of the various types of teaching situations, such as day and residential schools, public and private schools, and of various levels of instruction. In addition, guidelines specified that approximately half of the teachers should have had their professional preparation prior to, and half since, January 1946. No attempt was made, however, to secure a sample that would represent the proportionate distribution of any of these sub-groups within the total number of teachers of the deaf. The results of the sampling procedure can be seen in Appendix B where the background of the participating teachers is described.

STATISTICAL PROCEDURES USED TO ANALYZE
DATA IN TABLE 1, PAGE 7

Each of the 92 competencies (knowledges and abilities) listed in Table 1 was rated in two ways by the 100 participating teachers. First, they

checked whether, in their judgment, each item was "very important", "important", "less important", or "not important". Second, they checked whether they considered themselves to be "good", "fair", or "not prepared" in each of the competencies. The average importance of each item was computed by assigning a weight of 4 to "very important", 3 to "important", 2 to "less important", and 1 to "not important". Weighted averages of self-competence were computed for each item by assigning a weight of 3.94 to "good", 2.72 to "fair", and 1.50 to "not prepared". These values were determined by equating the average of the total importance ratings with the average of the total self-competence ratings. The distance (in z score units) that each of the scores (1, 2, and 3) lay from the average self-competence rating was calculated; and each of these scores (1, 2, and 3, respectively) was assigned the value on the 4-point scale (importance ratings) lying the same number of z-score units from the mean on the 3-point scale. These assigned values are referred to later as "converted scores".

Average ratings of importance ranged from a high of 3.89 to a low of 1.42. Average ratings of self-competence, in terms of converted scores, ranged from a high of 3.82 to a low of 1.76. Tables with average ratings for each item are available upon request from the Office of Education.

An item rated on importance was considered to have received an average rating of "very important" if the average was 3.50 or above; "important" if the average was between 2.50 and 3.49; "less important" if the average was between 1.50 and 2.49; and "not important" if the average was 1.49 or lower. The same principle was used in determining the average rating of self-competence. That is, the self-competence of the teachers was considered, on an average, to be "good" if the average of the converted scores was 3.34 or above; to be "fair" if the average was between 2.12 and 3.33; and to be "not prepared" if the average was 2.11 or lower.

RANK ORDER

A rank order of the list of 92 competencies has been determined for both the average ratings of importance and the average ratings of self-competence. Consecutive whole numbers were used for ranks even though some of the items received identical weighted scores. This was done so that the general reader could more easily understand the table, and was possible because of the negligible differences between the average of any one item and the next in the list. The items have been arranged in Table 1, page 7, according to the rank order of importance; the rank order of self-competence is indicated by a symbol at the end of each item, such as (SC,5) which appears after item 1.

TABULATION OF RESPONSES OF THE 100 TEACHERS

The inquiry forms filled out by the 100 teachers of the deaf were grouped, for purposes of tabulation, into the following categories:

- (a) day school teachers with preparation prior to January 1, 1946 (20)
- (b) day school teachers with preparation since January 1, 1946 (20)
- (c) residential school teachers with preparation prior to January 1, 1946 (45)
- (d) residential school teachers with preparation since January 1, 1946 (15)

The differences between the residential and day-school teachers and between those who received their professional preparation prior to 1946 and those who received it after 1946 were tested for statistical significance on the importance ratings (4-point scores) and on the self-competence ratings (3-point scores). The method used was the same for both groups. For example, the differences between the residential and day-school teachers (where X_1 represents scores for the residential and X_2 for the day teachers) were tested as follows: the average of the importance ratings for the residential-school teachers was computed ($M_1 = \frac{\sum fX_1}{n_1}$); and the average of the day-school teachers was computed ($M_2 = \frac{\sum fX_2}{n_2}$). The estimated standard deviation of the universes of which the X_1 and X_2 scores were samples were computed ($\hat{\sigma}_1 = \sqrt{\frac{fx_1^2}{n_1 - 1}}$ and $\hat{\sigma}_2 = \sqrt{\frac{fx_2^2}{n_2 - 1}}$); and the estimate of the standard error of the difference between the averages was determined ($\hat{\sigma}_{M_1 - M_2} = \sqrt{\frac{\hat{\sigma}_1^2}{n_1} + \frac{\hat{\sigma}_2^2}{n_2}}$). The observed difference between the averages of the two samples ($M_1 - M_2$) was then expressed in z -score units ($\frac{M_1 - M_2}{\hat{\sigma}_{M_1 - M_2}}$). This is termed the "critical ratio." The probability of an average difference as large as, or larger than, the observed average difference being obtained if we keep drawing samples of the same size from these groups was read from the table of the normal curve ("Proportion of Area Under the Normal Curve Lying More Than a Specified Number of Standard Deviations ($\frac{x}{\sigma}$) from the Mean").

In general, the process described above did not yield many statistically significant differences. Where differences were statistically significant, they have been started in table 1. The raw data, tabulated according to the foregoing categories, are available in the Office of Education.

CO-VARIATION BETWEEN RATINGS OF IMPORTANCE AND SELF-RATINGS OF COMPETENCE.

Because resources for a complete analysis of all the data were not available, and because a complete analysis did not seem necessary, a random sample of items (comprising 10 of the items in an area) was drawn. For each of these items, a "scatter diagram" or "contingency table" was prepared, with the ratings of importance on the X-axis and the self-competence ratings on the Y-axis; and the coefficient of contingency for the table was computed. Where necessary, the importance-ratings of "Not important" and "Less important" were combined, or the self-competence ratings of "Not prepared" and "Fair" were combined, in order to avoid low-frequency intervals, and guarantee that each column of the contingency table would include a chance-frequency of 15 or more. This is desirable in order to obtain a fair and stable value of the contingency coefficient. Most of the contingency coefficients were computed from 3×2 tables, though some were computed from 3×3 , and some from 2×2 .

The statistical significance of each contingency coefficient was computed by the chi-square technique, with $(x-1)(t-1)$ degrees of freedom, where x =no. of intervals on the X-axis, and t =no. of intervals on the Y-axis.

For each contingency table, there was computed not only the actual value of C , but also the maximum value of C obtainable from the set of marginal frequencies characterizing the particular contingency table. This maximum was computed by inserting in one (or more) of the cells of the table the highest possible number consonant with the marginal frequencies and a positive relation between X and Y . Because of the small number of degrees of freedom, the numbers to be inserted in the remaining cells of the table were readily determined by reference to the marginal frequencies and the figures in the cell (or cells) already containing the maximum entry. The coefficient of contingency of the table, thus constructed, was calculated in the usual manner. This maximum coefficient of contingency provides a useful reference-value for the evaluation of the contingency coefficient calculated from the original or empirical table.

STATISTICAL SIGNIFICANCE OF DIFFERENCES BETWEEN AVERAGE RATINGS OF IMPORTANCE AND SELF-COMPETENCE

To determine the statistical significance of the difference between the average importance rating and the average self-competence rating on an item, the procedure employed was as follows:

The self-competence ratings (3-point scores) were equated to their corresponding values on the 4-point score ratings (importance ratings). The difference between the ratings on importance and self-competence for each

teacher was determined ($I_1 - C_1$; $I_2 - C_2$, etc.; where the subscripts 1 and 2 represent the teachers answering the question). The average difference be-

tween the ratings for all teachers was calculated ($\frac{\sum D}{N}$); the standard deviation ($\sqrt{\frac{\sum D^2}{N} - (M_D)^2}$) and the standard error of the average of the differences ($\frac{D}{\sqrt{N}}$) was computed; the average difference was expressed in z-score units ($\frac{M_D}{M_D}$) (this is the "critical ratio"); and the probability of a mean difference as large as or larger than the one obtained for a given item was read from the appropriate table of probabilities. (Reference: Quinn McNemar, *Psychological Statistics*, pages 73-75.)

In the case of items for which the difference between the average importance rating and the average self-competence rating (converted scores) was less than 0.20, no test of statistical significance was employed. It was considered that differences smaller than 0.20 were too small to have any practical importance, and therefore need not be seriously considered.

In the procedure described above, only paired ratings were employed; thus, if a teacher rated an item for importance, but failed to make a self-competence rating for the item, it was impossible to determine the difference between importance and self-competence of that teacher for that item. The teacher's response to this item was therefore not usable in this calculation. It should be pointed out that *all* teachers' ratings were used in obtaining the averages for importance on which the ranks in table 1 are based; and similarly, all teachers' ratings were employed in obtaining the averages for self-competence. In these instances, the calculation does not call for the pairing of the two kinds of ratings. See Appendix E, page 85 for additional statistical information.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

★ APPENDIX D. ★

★ Inquiry Form Used To Collect ★
★ Information From the 100 ★
★ Teachers of Deaf Children ★

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

THE OFFICE OF EDUCATION STUDY

"QUALIFICATION AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN"

INQUIRY FORM EXC-4C: For Teachers of Children Who Are Deaf

Miss
Mrs.

- 1.1 Your name Mr. Date
- 1.2 Your mailing address
City (or Post Office) State
- 1.3 Name and location of school in which you teach
- 1.4 Indicate the type of school organization in which you teach by checking ✓ ONE of the following:
— Residential school for deaf children
— Special day school for deaf children only
— Center of two or more special classes for deaf children in a regular day school
— Single special class for deaf children in a regular day school
— Other: (Specify)
- 1.5 Indicate by filling in the blanks:
Total number of pupils in your class
Number of pupils in your class whom you classify as deaf
Number of pupils in your class whom you classify as hard of hearing
- 1.6 Indicate the group or groups of deaf children which you teach by checking ✓ ONE or MORE of the following:
— Nursery or Kindergarten — Elementary — Secondary
- 1.7 Indicate the period in which you took the *major* part of your *specialized* preparation which led to your initial certification or approval as a teacher of deaf children by checking ✓ ONE of the following:
— Prior to December 31, 1945.
— Since January 1, 1946.

IN PUBLISHED REPORTS, OPINIONS EXPRESSED THROUGH THIS INQUIRY WILL NOT BE IDENTIFIABLE WITH THE NAMES OF THE PERSONS COMPLETING THE FORM

TEACHERS OF CHILDREN WHO ARE DEAF

- 1.8 Indicate the plan by which you received the *major* part of your *specialized* preparation in the education of the deaf.

(Place ONE check ☒ in the appropriate square below.)

AND

If you have had *additional* preparation by other plans, indicate this by placing X's in the appropriate squares.

Type of Program		Prior to on-the-job teaching experience with so-called normal children		After on-the-job experience with so-called normal children	
		Prior to teaching deaf children	Concurrently with teaching deaf children	Prior to teaching deaf children	Concurrently with teaching deaf children
Program offered at:	Level:				
An accredited ¹ college or university which consisted largely of work taken during the regular academic year	Undergraduate				
	Graduate				
An accredited college or university which consisted largely of work taken at summer school sessions	Undergraduate				
	Graduate				
A residential school for the deaf independent of an accredited degree-granting institution (therefore without college credit)					

¹ An accredited college or university is defined by the Division of Higher Education, U. S. Office of Education, as an institution certified by the American Association of Colleges for Teacher Education, or by one of the regional Associations of Colleges and Secondary Schools.

Other (Specify—in-service program offered by a school or school system, etc.)

- 1.9 Indicate your auditory acuity by checking ☒ ONE of the following:

—Normal hearing —Hard of hearing —Deaf

- 1.10 Do you, as a teacher of deaf children, perform services for your pupils or their parents over and above those directly related to your classroom activities..... Yes—No—
If your answer is "yes", please describe these below. (Attach an additional page if necessary.)
2. Of the types of experiences listed below which you have had, indicate which THREE have contributed the *most* and which THREE have contributed the *least* toward your success in performing the various duties connected with your present position as a teacher of the deaf.

Place an "M" before the THREE which have contributed the MOST.
Place an "L" before the THREE which have contributed the LEAST.

AND

Place a check ☐ before those experiences which you have *not* had, but which you believe would contribute *much* to your success in your present position.

- 2.1 General cultural education in the liberal arts and sciences at a college or university.
- 2.2 General teacher-preparation including educational psychology, mental hygiene, child development, elementary and secondary methods, history and philosophy of education, and so on.
- 2.3 *Pre-service*, specialized teacher preparation¹ in the education of children who are deaf.
- 2.4 *In-service* educational programs concerning the education of the deaf, such as study groups, curriculum planning conferences, staff workshops, and so on.
- 2.5 Teaching experiences with so-called normal children.
- 2.6 Teaching experiences with children who are deaf.
- 2.7 Administrative and/or supervisory experiences as a director, supervisor or coordinator of educational programs for deaf children in State and/or local school systems.
- 2.8 Experiences as a college or university staff member relative to the specialized preparation of teachers of children who are deaf.
- 2.9 Exchange of ideas with professional personnel in areas related to the education of deaf children, such as psychologists, social workers, and medical personnel; and/or observation of the work done by them.
- 2.10 Participation in the activities of educational, welfare and/or community organizations and agencies concerned with the education of deaf children, such as the International Council for Exceptional Children, Volta Speech Association for the Deaf, Convention of American Instructors of the Deaf, American Speech and Hearing Association, and so on.
- 2.11 Self-directed study of books, journals, and other publications related to the education of children who are deaf.
- 2.12 Self-directed investigation and research on educational problems related to children who are deaf.
- 2.13 *Other* (Specify the nature of the experience):

¹ Throughout the inquiry form, "specialized teacher-preparation" relates to experiences including courses which are designed specifically to prepare teachers of exceptional children, and excludes remedial reading, mental hygiene, child development, etc., unless they are *directly* pointed to exceptional children.

3. How important do you consider each of the following for a teacher of deaf children?
(Check \checkmark ONE of the four columns on the *left* for each item.)

AND

- How do you rate your competency at each of the items listed?
(Check \checkmark ONE of the three columns on the *right* for each item.)

Very important	Important	Less important	Not important	ITEM	Good	Fair	Not prepared
				THE ABILITY:			
				to administer to deaf children—			
				3.1 pure-tone audiometric tests			
				3.2 standardized group achievement tests			
				3.3 group nonlanguage tests of mental ability.			
				3.4 individual performance tests of mental ability.			
				3.5 individual diagnostic tests of reading and arithmetic disability.			
				to draw educational interpretations from—			
				3.6 audiograms			
				3.7 otological and other medical reports			
				3.8 psychological reports			
				3.9 reports of social workers			
				3.10 case records and histories			
				3.11 to develop and make use of individual educational records of deaf children.			
				3.12 to recognize possible causes of social, educational and emotional maladjustments of deaf children and participate in planning courses of action aimed at alleviating these.			
				3.13 to recognize the individual differences of each deaf pupil and to make provision for these.			
				3.14 to teach speech development and voice improvement to deaf pupils by one or more methods such as the elements, syllables, whole words, kinesthetic, auditory method.			
				3.15 to use the visual speech technique developed by the Bell Telephone laboratories.			
				3.16 to teach language development by one or more methods, such as the Fitzgerald Key, Barry Five Slate, Wing's Symbols, the Natural Method.			

Very important	Important	Less important	Not important	ITEM	Good	Fair	Not prepared
				3.17 to teach speechreading (lipreading) by one or more methods such as Nitche, Jena, Kinzie, Newer, Müller-Walle, and so on.			
				3.18 to teach auditory training by one or more methods such as Goldstein's Acoustic Technique, the Whitehurst Method, and so on.			
				3.19 to help deaf children to use visual clues in analyzing a situation and in communicating with others.			
				3.20 to organize and develop a curriculum for deaf children on the basis of their individual needs and potentialities.			
				3.21 to organize and develop a curriculum around socially useful and meaningful central themes or units of experience.			
				to provide for deaf pupils opportunities in the curriculum for experiences in—			
				3.22 dramatic arts (play-acting, etc.)			
				3.23 arts and crafts (leatherwork, weaving, etc.)			
				3.24 fine arts (finger painting, clay modeling, etc.)			
				3.25 domestic arts (cooking, sewing, etc.)			
				3.26 industrial arts (woodworking, power tools, etc.)			
				3.27 music (rhythm, instrumental, etc.)			
				3.28 physical education (including play and recreation).			
				3.29 health education (healthful living, etc.)			
				3.30 to take responsibility for, or to assist with, one or more of such activities as the Boy or Girl Scouts, photographic club, and so on.			
				3.31 to plan and carry out an assembly program.			
				3.32 to organize and carry out field trips			
				3.33 to encourage and create situations in school in which deaf children have an opportunity to converse naturally and freely with normally hearing persons.			
				3.34 to create a wide range of visual experiences to compensate for the deaf child's hearing disability.			

Very important	Important	Less important	Not important	ITEM	Good	Fair	Not prepared
				3.35 to provide opportunities for a wide range of social experiences for deaf pupils in order to further their social and intellectual development.			
				3.36 to teach a multi-grade class of deaf children			
				3.37 to teach deaf pupils with multiple atypical conditions such as giftedness, mental retardation, visual loss, etc.			
				3.38 to help deaf children develop socially acceptable patterns of personal hygiene and behavior.			
				3.39 to operate amplifiers and other audio-aids.			
				3.40 to operate filmstrip and motion picture projectors, and other visual aids.			
				3.41 to give first-aid to hearing aids			
				3.42 to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for deaf children.			
				3.43 to administer an educational program for deaf children (selection of personnel, finance, organizing and integrating services, reporting, recording, and so on).			
				3.44 to contribute to community leadership in establishing an educational program for deaf children.			
				to counsel deaf children with respect to—			
				3.45 their educational problems			
				3.46 their vocational problems and life goals.			
				3.47 their emotional problems and personal attitudes toward their handicap.			
				3.48 their social problems.			
				3.49 to cooperate with special teachers and regular school personnel in developing an integrated program for each deaf pupil.			
				3.50 to work as a member of a team with other professional workers (such as medical and psychological personnel) in making a case study of a deaf child aimed at planning a program suited to his needs and abilities.			
				to participate with other members of a professional team in helping parents with problems related to the deaf child's—			
				3.51 limitations and potentialities.			

Very important	Important	Less important	Not important	ITEM	Good	Fair	Not prepared
				3.52 social and emotional problems			
				3.53 occupational placement			
				3.54 school placement			
				3.55 to help parents get information which will assist them in facing the problems arising from having a deaf child in the family.			
				to interpret educational programs for, and the problems and abilities of the deaf to—			
				3.56 the general public			
				3.57 normally hearing children			
				3.58 teachers of normally hearing children			
				3.59 nonprofessional school workers such as bus attendants, school custodians, etc.			
				3.60 to work effectively with P. T. A., alumni groups, and other organizations associated with the school.			
				3.61 to read lips (teacher's own ability)			
				3.62 to use the "manual" alphabet in teaching			
				3.63 to use "sign" language in teaching			
				3.64 to enunciate clearly and pronounce correctly.			
				3.65 to write clearly (cursive and manuscript styles) on charts, paper and blackboard.			
				3.66 to play a piano and to develop and direct a rhythm band.			
				A KNOWLEDGE AND/OR UNDERSTANDING OF:			
				3.67 the causes of the various types of hearing disability.			
				3.68 the general plan of medical treatment of the different types of hearing disabilities.			
				3.69 the general meaning of the diagnosis and the prognosis for each individual deaf pupil in your class.			
				3.70 recent developments in theories and controversies on diagnosis and treatment of different conditions resulting in deafness.			
				the significance of—			
				3.71 the age of onset of deafness			
				3.72 the amount of usable hearing			
				the anatomy and physiology of—			
				3.73 the speech mechanisms			
				3.74 the hearing mechanisms			

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Very important	Important	Less important	Not important	ITEM	Good	Fair	Not prepared
				3.75 the possible effect of the socio-economic conditions and emotional climate of the home on the deaf child's social, emotional and intellectual development.			
				3.76 the basic theory of electronics as applied to amplifiers and hearing aids.			
				the methods and/or techniques of teaching—			
				3.77 the so-called normal child.			
				3.78 the gifted child.			
				3.79 the mentally retarded.			
				3.80 the blind.			
				3.81 the athetoid.			
				3.82 the socially and emotionally disturbed.			
				3.83 other (specify):			
				3.84 the methods of hearing testing and the various instruments used for this purpose.			
				3.85 the factors involved in fitting hearing aids.			
				3.86 materials useful in teaching lipreading to the deaf.			
				3.87 reference materials and professional literature on the education and psychology of the deaf.			
				3.88 sources of procurement of special educational materials and equipment for deaf children.			
				3.89 the educational provisions for deaf children under existing Federal, State and local laws and regulations.			
				3.90 the purposes, services and locations of national organizations concerned with the education and/or general welfare of the deaf such as the International Council for Exceptional Children, the Volta Speech Association for the Deaf, and the Convention of American Instructors of the Deaf.			
				3.91 the locations of services offered by non-school organizations such as clinics, health departments and vocational rehabilitation agencies, for deaf children and their parents.			
				3.92 the findings of research studies which have bearing on the education, psychology and social status of the deaf.			
				3.93 the history of education of the deaf.			

NOW please review those items (3.1 through 3.93) for which you have placed a check in the *very important* column. Encircle the checks \checkmark for the FOUR of these which you consider MOST IMPORTANT. Record the numbers of these items below, and, if you will, tell briefly why you selected each of them.

ITEM No. _____

ITEM No. _____

ITEM No. _____

ITEM No. _____

4. Please answer the following questions relative to the program of specialized preparation which *was* offered by the institution at which you received the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of deaf children. (Check \checkmark in ONE of the three columns on the right in answering each of the following questions. Leave blank those experiences you have not had.)

ITEM	Yes	No	Unde- cided
In your experiences in student-teaching of deaf children—			
4.1 did the teachers with whom you did your specialized student-teaching give sufficient constructive, individual criticism and advice?			
4.2 in general, was the quality of teaching of the special teachers with whom you did your student-teaching adequate?			
4.3 did the supervising instructor make frequent-enough visits to observe your teaching?			
4.4 did he hold individual and or group conferences with you frequently enough?			
4.5 did he give you a sufficient amount of constructive criticism and advice?			
4.6 were you given sufficient opportunity to help in the development of the activities and schedule of the group with whom you did your student-teaching?			
4.7 did you remain with one group long enough to note pupil progress?			
4.8 were more than two student-teachers frequently assigned to one group of pupils at the same hour for the purpose of teaching?			

ITEM	Yes	No	Undecided
4.9 Was lack of planning and evaluation under the direction of staff-supervisors a weakness in the student-observation program?			
4.10 Do you believe that you received <i>too much</i> theory and <i>not enough</i> supervised, practical experience in the education of the deaf?			
4.11 Do you believe that you received <i>too much</i> supervised, practical experience and <i>not enough</i> theory in the education of the deaf?			
Was there an undue amount of repetition and overlapping of content—			
4.12 in the liberal arts and sciences courses (history, English)?			
4.13 in the general teacher-education courses?			
4.14 in the specialized courses in the education of deaf children?			
4.15 Did your specialized preparation include enough work in the education of other exceptional children such as the blind, gifted, hard of hearing, and mentally retarded?			
4.16 Did you get sufficient background in phonetics to teach speech to deaf children?			

5. Do you consider the following experiences "very important," "important," "less important," or "not important" in the specialized preparation of teachers of the deaf? (Check \checkmark ONE of the four columns on the left for each item.)

AND

How much emphasis was placed on these experiences by the institution at which you received the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of the deaf?

(Check \checkmark ONE of the four columns on the right for each item.)

Very important	Important	Less important	Not important	ITEM	Too much	About right	Too little	None at all
				Supervised <i>student-teaching</i> of a class of <i>deaf</i> children—				
				5.1 at the nursery school level				
				5.2 at the elementary level				
				5.3 at the secondary level				
				Supervised <i>student-teaching</i> of <i>deaf</i> children—				
				5.4 in language development				
				5.5 in lipreading (speechreading)				
				5.6 in speech development and voice improvement				
				5.7 in the regular academic subjects				
				5.8 Supervised <i>student-teaching</i> of <i>normally</i> hearing children—				

Very important	Important	Less important	Not important	ITEM	Too much	About right	Too little	None at all
				5.9 Student-observation (without active participation) of teaching of deaf children.				
				5.10 Experiences in developing and/or interpreting individual case records of deaf children.				
				5.11 Visits to the homes of deaf children in the company of supervising teachers.				
				<i>Planned observation—</i>				
				5.12 in day schools or classes for deaf children.				
				5.13 in residential schools for deaf children.				
				5.14 in schools or classes dealing with other kinds of handicapped children.				
				5.15 of children with multiple handicaps including deafness.				
				<i>Planned observation of the work done by—</i>				
				5.16 speech and hearing clinics				
				5.17 otological clinics				
				5.18 rehabilitation centers for deaf youth and adults.				
				5.19 cerebral palsy clinics				
				<i>Planned visits—</i>				
				5.20 to nonschool community organizations interested in the deaf such as recreation groups, clubs, and community houses.				
				5.21 to organizations interested in the general welfare of the deaf such as State Rehabilitation Agencies, the National Association for the Deaf.				
				<i>Planned observation—</i>				
				5.22 of multiprofessional case conferences held by representatives from such fields as the medical, psychological, educational, and social welfare to study and make recommendations on individual deaf children.				
				5.23 of conferences of on-the-job teachers of the deaf on pupil placement, curriculum adjustment, child study, and so on.				

6. Are there personal characteristics needed by a teacher of the deaf which are different in *degree or kind* from those needed by a teacher of normally hearing children? Yes ___ No ___
If your answer is "yes", please list and comment. (Attach additional sheets if necessary.)
7. Do you believe there are special methods and techniques for teaching deaf children—
- | | |
|--|----------------|
| 7.1 to read | Yes ___ No ___ |
| 7.2 to acquire <i>arithmetic</i> fundamentals and reasoning? | Yes ___ No ___ |
| 7.3 to acquire understandings in the <i>social study areas</i> ? | Yes ___ No ___ |
| 7.4 to acquire understandings in <i>science</i> | Yes ___ No ___ |
| 7.5 to develop <i>art</i> expression and appreciation? | Yes ___ No ___ |
| 7.6 to acquire <i>vocational</i> skills? | Yes ___ No ___ |
8. Here is a list of six types of licensing or certifying procedures. Which type do you consider is *most desirable* as a State department of education requirement for teachers of children who are deaf?
- (Check ☒ ONE of the following.)
- 8.1 **CERTIFYING PROCEDURE:** A regular credential valid for teaching in the regular grades at *one* level (either elementary or secondary); and *no* special credential to teach the deaf.
 - 8.2 **CERTIFYING PROCEDURE:** A single special credential valid for teaching the deaf at *one* level (either elementary or secondary); and *no* regular credential.
 - 8.3 **CERTIFYING PROCEDURE:** A single special credential valid for teaching the deaf at *both* the elementary and secondary levels; and *no* regular credential.
 - 8.4 **CERTIFYING PROCEDURE:** A special credential valid for teaching the deaf at *one* level (either elementary or secondary); *plus* a credential to teach in the regular grades at the same level.
 - 8.5 **CERTIFYING PROCEDURE:** A special credential valid for teaching the deaf at *both* the elementary and secondary levels; *plus* a credential to teach in the regular grades at both levels.
 - 8.6 **CERTIFYING PROCEDURE:** A regular credential valid for teaching in the regular grades at *one* level (either elementary or secondary), which has been validated (by special preparation) for teaching the deaf at the same level.
 - 8.7 **SOME OTHER CERTIFYING PROCEDURE (SPECIFY):**

GIVE A BRIEF STATEMENT OF THE REASONS FOR YOUR CHOICE:

9. Certifying requirements:

- 9.1 Is a special credential for teachers of the deaf granted by a State agency in your State? Yes___ No___

If your answer is "yes" to 9.1—

9.11 By which agency is it granted? _____

9.12 Is your present employment dependent upon your holding this credential? Yes___ No___

- 9.2 If there is no special State credential or if your answer to 9.12 is "no", what certificate or requirements govern your present employment? Specify:

- 9.3 If there are special certifying requirements for teachers of the deaf set by a State agency in your State, how do you rate these?

(Check ✓ in ONE of the four columns on the right for each item. Leave blank those you do not feel qualified to rate.)

ITEM	Adequate	Partially adequate	Inadequate (should be revised)	No requirements
How adequate are your State requirements with regard to—				
9.31 specialized technical knowledge in the education of the deaf?				
9.32 understanding of the child growth and development of all children?				
9.33 student teaching of children who are deaf?				
9.34 experiences in clinics and other special facilities for children who are deaf?				

10. Do you believe there should be requirements for teachers of the deaf which are different from, or in addition to, those set by the State Department of Education in your State? Yes___ No___

If your answer is "yes", who should set these, and how should they be different?

11. Which of the following *should* participate in developing State certifying standards for teachers of the deaf?

(Check ✓ ONE or MORE of the following.)

Representatives from:

— 11.1 Teacher-education institution.

— 11.2 Classroom teachers of deaf children.

— 11.3 Local supervisors of teachers of the deaf.

— 11.4 State personnel in special education.

— 11.5 Local school administrators in general education.

— 11.6 State school administrators in general education.

— 11.7 The State certifying department.

— 11.8 Specialized welfare agencies.

— 11.9 Health departments.

— 11.10 The medical profession.

— 11.11 Parent groups.

— 11.12 Other personnel (specify):

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12. How *should* the representatives (checked in 11 above) participate in formulating the certifying standards for teachers of the deaf?

(Check ☒ ONE or MORE of the following.)

- ☐ 12.1 Personnel from the State certifying department should coordinate the developing of standards for teachers of the deaf.
- ☐ 12.2 A council or committee which deals with all aspects of State teacher-certification should coordinate the developing of standards for teachers of the deaf.
- ☐ 12.3 State personnel in special education should coordinate the developing of the standards.
- ☐ 12.4 Tentative standards should be formulated by personnel in the State Education Department and submitted to the other groups for review and suggestions.
- ☐ 12.5 There should be a full-scale conference of all representatives with equal participation in formulating and revising the standards.
- ☐ 12.6 The State department personnel should call a series of conferences, meeting with groups of representatives from the various organizations, institutions and agencies individually.
- ☐ 12.7 Other (specify):

13. What procedures *should* be used in arriving at the certifying standards?

(Check ☒ ONE or MORE of the following.)

- ☐ 13.1 Standards should be arrived at through a systematic analysis of the competencies needed by teachers of the deaf.
- ☐ 13.2 Standards should be developed by adopting those set by other States.
- ☐ 13.3 Standards should be developed by an analysis and modification of the standards of other States.
- ☐ 13.4 Standards should be developed to fit in with the course offerings at teacher-education institutions.
- ☐ 13.5 Other (specify):

- 14.1 Indicate (1) the amount of successful *classroom teaching* of NORMALLY HEARING children which you believe should be *minimal*, *desirable* and *ideal* prerequisites for a teacher of the deaf, and (2) the amount of teaching of normally hearing children which you have had.

(Place ONE check ☒ in each column on the right opposite the appropriate amount.)

Amount of teaching of normally hearing children as a PREREQUISITE for teaching deaf children	Minimal	Desirable	Ideal	Amount which you have had
No teaching of normal children				
At least one semester of half-time student-teaching with normal children (or equivalent)				
At least one semester of full-time student-teaching with normal children (or equivalent)				
At least 1 year of on-the-job classroom teaching with normal children				
At least 2 years of on-the-job classroom teaching with normal children				
At least 3 years of on-the-job classroom teaching with normal children				
Other (specify):				

- 14.2 Indicate (1) the amount of student-teaching with DEAF children that you believe should be *minimal*, *desirable*, and *ideal* prerequisites for a teacher of the deaf, and (2) the amount of *student-teaching* of deaf children which you have had.
(Check ☒ in each column on the right opposite the appropriate amount.)

Amount of student-teaching of deaf children needed as a PREREQUISITE for On-the-job teaching of the deaf	For experienced regular classroom teachers			For teacher-candidates with only student-teaching of normally hearing children			Amount which you have had
	Minimal	Desirable	Ideal	Minimal	Desirable	Ideal	
No student-teaching of deaf children							
1-75 clock hours ¹							
76-150 clock hours							
151-225 clock hours							
226-300 clock hours							
Other (specify):							

¹ One semester hour=15 clock hours; one quarter hour=10 clock hours; one academic year=450 clock hours.

15. Indicate, as one factor, the combination of professional preparation and experience that you believe the following special educational personnel on a college or university staff should have in order to be competent in carrying out their duties. (Assume comparable capacities and personal fitness.)

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ITEM	Director of the special education program of teacher preparation	Area specialists		
		Course instructor (class coordinator)	Demonstration teacher	Supervisor of student teaching
15.1 (Check ONE per column.) Bachelor's degree (or equivalent) Master's degree Doctor's degree				
15.2 <i>Major</i> in: (Check ONE per column.) one specialized area of special education two or three specialized areas of special education orientation to all areas of special education general educational administration and supervision clinical psychology elementary teaching methods secondary teaching methods other (specify):				
15.3 <i>Minor</i> in: (Check ONE or MORE per column.) one specialized area of special education two or three specialized areas of special education orientation to all areas of special education general educational administration and supervision clinical psychology elementary teaching methods secondary teaching methods other (specify):				
15.4 <i>Professional experience</i> : (Check ONE or MORE per column.) specialized teaching of at least one type of exceptional children regular classroom teaching of normal children				

ITEM	State personnel		Local personnel	
	Director or overall supervisor	Supervisor or consultant in a specialized area	Director or overall supervisor	Supervisor or consultant in a specialized area
teaching special education in a teacher-training institution				
supervisory duties in special education at the <i>State</i> or <i>local</i> level				
administrative duties in general education at the <i>State</i> or <i>local</i> level				
other (specify):				

16. Indicate, as one factor, the combination of professional preparation and experience that you believe special education personnel in *State* and *local* departments of education should have in order to be competent in carrying out their duties. (Assume comparable capacities and personal fitness.)

16.1 (Check ONE per column.)

Bachelor's degree (or equivalent)

Master's degree

Doctor's degree

16.2 *Major* in: (Check ONE per column.)

one specialized area of special education

two or three specialized areas of special education

orientation to all areas of special education

general educational administration and supervision

clinical psychology

elementary teaching methods

secondary teaching methods

other (specify):

16.3 *Minor* in: (Check ONE or MORE per column.)

one specialized area of special education

two or three specialized areas of special education

TEACHERS OF CHILDREN WHO ARE DEAF

ITEM	Director of the special education program of teacher preparation	Area specialists		
		Course instructor (class coordinator)	Demonstration teacher	Supervisor of student teaching
orientation to all areas of special education.....				
general educational administration and supervision.....				
clinical psychology.....				
elementary teaching methods.....				
secondary teaching methods.....				
other (specify):.....				
16.4 <i>Professional experience:</i> (Check ONE or MORE per column.)				
specialized teaching of at least one type of exceptional children.....				
regular classroom teaching of normal children.....				
teaching of teacher-candidates in special education at a college or university.....				
supervisory duties in special education at the <i>State</i> or <i>local</i> level.....				
administrative duties in general education at the <i>State</i> or <i>local</i> level.....				
other (specify):.....				

17. What *services* do you believe a supervisor of, or a consultant on, the education of the deaf in a school, local school system, or region should provide in order to be *most helpful* to you, to your pupils, and to the community?
(Number your comments to facilitate tabulation.)

18. Do you believe there should be a supervisor of, or a consultant on, the education of the deaf at the State department of education? . . . Yes ____ No ____ If your answer is "yes," what *services* should this person give which are different from, or in addition to, those that you have described in number 16?

(Number your comments to facilitate tabulation.)

19. What are some of the more important *personal characteristics* which you believe a supervisor of, or a consultant on, the education of the deaf needs to be most helpful to you, to your pupils, and to the community?

(Number your comments to facilitate tabulation.)

20. What do you consider were (1) the outstanding strengths, and (2) the outstanding weaknesses of the program for the preparation of teachers of the deaf which was offered by the institution at which you received the *major* part of your specialized preparation?

(Number your comments to facilitate tabulation.)

Outstanding Strengths

Outstanding Weaknesses

20. If you have any *general idea* or *viewpoint* or *philosophy* about the requirements for successful teaching of the deaf, not already tapped, or expressed through this questionnaire, we would appreciate learning about this in the space below.
(Attach additional pages if desirable.)

Inquiry forms used to collect information from other special education personnel are available upon request from the Office of Education.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

★ APPENDIX E ★

★ Additional Information on Statistical ★ ★ Procedures and Results ★

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

SELF-COMPETENCE RATINGS (Table 1, page 7)

Self-competence rank order Nos. 1-51 received an average rating of "good"; rank order Nos. 52-87, "fair"; and 88-92, "not prepared."

EVALUATION OF RECENTLY PREPARED TEACHERS (Graph 1, page 40)

The series of questions was answered by 46 State directors and supervisors and by 59 local directors and supervisors. The percentages shown in the graph are based on the number of persons answering each particular question. Questions 6 and 7 and questions 9 and 10 were combined in the inquiry form filled out by State personnel. In each case, the percent of satisfied responses was used twice on the graph to make possible some comparison with the responses of local personnel on these four questions.

State personnel evaluated teachers prepared within the 5-year period preceding the Study; local personnel evaluated teachers prepared within the 7-year period preceding the Study.

PROFESSIONAL EXPERIENCES (Table 2, page 44)

The 100 teachers rated the relative importance of each of 23 experiences by checking whether, in their judgment, it was "very important," "important," "less important," or "not important" to include the experiences in the specialized preparation of teachers of partially seeing children. The *average importance* of each experience was computed by multiplying the number of checks in the "very important" column by 4, those in the "important" column by 3, those in the "less important" column by 2, and those in the "not important" column by 1. The results were added together and divided by the number of checks for that particular item.

A *rank order* of the list of experiences was then determined on the basis of these average ratings of importance. The items have been arranged in table 2 according to this rank order of importance. The rank order numbers and range of average ratings, within each category of importance are shown below. Tables with the average rating for each experience are available upon request from the Office of Education.

Category	Range of average ratings	Rank order numbers
Very important (3.50-4.00)	3.51-3.94	1-7
Important (2.50-3.49)	2.54-3.37	8-20
Less important (1.50-2.49)	2.17-2.48	21-23
Not important (1.00-1.49)		

The differences between the residential and day-school teachers and between those who received their professional preparation prior to 1946 and those who received it after 1946 were tested for statistical significance on the ratings of importance of the 23 experiences. The method used was the same described for table 1 (see p. 62). Only one difference was significant at the .01 level of confidence; this item is starred in table 2, page 44.

Table A—Percent of Special Education Personnel Indicating Number of Clock Hours of Student Teaching with Deaf Children Needed by Those Preparing To Teach in This Area

Clock hours	Percent of personnel rating for teacher candidates with regular classroom experience with normal children				Percent of personnel rating for teacher candidates with only student teaching of normal children			
	Teacher	State	Local	College	Teacher	State	Local	College
1	2	3	4	5	6	7	8	9
MINIMAL:								
None	11	8	2	4	5	4		2
1-75	42	28	38	38	20	18	11	35
76-150	36	34	53	49	54	37	68	38
151-225	4	26	7	4	14	28	11	15
226-300	5	4		4	5	9	10	9
Over 300	2				2	4		
Number answering	55	47	55	45	44	46	53	45
Median clock hours	71	106	90	87	110	133	118	100
DESIRABLE:								
None								
1-75	17	14	4		4	5	2	
76-150	33	21	26	31	18	8	9	28
151-225	42	38	58	60	65	49	70	44
226-300	8	21	13	9	13	30	13	26
Over 300		5				8	6	2
Number answering	64	42	53	45	46	37	53	46
Median clock hours	151	179	178	174	183	207	192	188
IDEAL:								
None								
1-75		2	2					
76-150	11	7	4			6		
151-225	37	14	25	35	15	9	10	21
226-300	47	59	69	58	76	70	80	63
Over 300	5	18		9	9	15	20	16
Number answering	64	44	52	43	54	34	52	38
Median clock hours	228	260	246	248	260	263	263	260

Table B.—Special Education Personnel Rate Amount of Teaching Experience with Normal Children Needed by Those Preparing To Teach Deaf Children (see graph 3, page 48)

Amount of teaching experience with normal children	Percent of personnel rating			
	Teachers	State	Local	College
MINIMAL:				
None	25	16	13	22
1 semester, half-time student teaching	33	20	25	45
1 semester, full-time student teaching	16	30	15	20
1 year of classroom teaching	14	32	39	13
2 years of classroom teaching	10		6	
3 years of classroom teaching	2	2	2	
More than 3 years of classroom teaching				
Number answering	51	44	61	45
DESIRABLE:				
None	5			
1 semester, half-time student teaching	25	7	13	22
1 semester, full-time student teaching	30	16	17	28
1 year of classroom teaching	22	30	26	36
2 years of classroom teaching	14	40	35	14
3 years of classroom teaching	2	7	9	
More than 3 years of classroom teaching	2			
Number answering	56	43	54	50
IDEAL:				
None	4			
1 semester, half-time student teaching	4	2		
1 semester, full-time student teaching	17	2	7	9
1 year of classroom teaching	39	15	16	35
2 years of classroom teaching	15	27	31	29
3 years of classroom teaching	19	52	40	27
More than 3 years of classroom teaching	2	2	6	
Number answering	48	41	55	45